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# EDITORIAL—SOME HIGHLIGHTS

## 1. General Economic Scene

### State:

*The 1975-76 State Budget :* The Budget as presented (See last issue p. 193) with a few modifications was approved by the Legislative Assembly by the end of April. The half percent increase in Sales Tax on oil cakes was approved, a Goods Transport Corporation is to be set up with a capital Rs. 1.20 crores and 100 lorries, Rs. 5 crores are allocated for providing Takkavi loans to farmers ranging from Rs. 500 to Rs. 2,000 for deepening wells, and the dearness allowance or government employees has been increased. The budget is a good holding in a difficult drought year for the State.

*Drought* : Drought conditions in the State continued its serious impact in March and April. Out of 17,069 revenue villages, 10,968 have been declared drought hit. On drought relief schemes, Rs. 1 crore a week is being spent, by March 31, Rs. 19 crores were expended, the entire Union grant of Rs. 7.5 crores (see last issue, page 195) being spent and a utilization certificate sent to the Union authorities. Wages at first fixed at Rs. 3, have been increased to Rs. 5 per day and all reports received show that the deepening of wells, desilting of tanks and other relief operations are being speedily and effectively executed. The public distribution system has been expanded to cover double the families from 37.34 lakhs to 70 lakh families. There is a reenumeration for the issue of fresh family cards, which are being computerised to avoid mistakes and misuse. The Union Government increased the March supply of wheat to 50,000 tonnes and the April supply to 60,000 tonnes and the distribution of this enlarged supply of wheat (from 5,000—6,000 tonnes per month) has helped to stabilise the price of rice, and in some areas like Tiruchi and Tirunelveli to bring down the price to Rs. 3—3.30 per kg. Further rice is being made available at 5 kg. per month to those with a monthly income of Rs 500 and above at Rs. 2.50 per kg. The government is also importing coarse grains from other States and has persuaded the Union authorities to negotiate with other countries the import of rice. One dark spot in this situation is the continuing complaint of the Southern Railways about 100 wagons and 21,000 bags of food grains lying uncleared by merchants at Dindigul, Madurai, Virudhunagar and Tiruchi which results in holding back supplies from the market and slowing down the turn around of railway wagons which are in demand. CSO's price indices for 1974 referred to in the last issue (p. 196) records a continuing rise in food prices from 327 in August to 344 in September 1974, from 362 in August to 404 in October for consumer prices of agricultural labourers, with some slowing in Madras (304) and Madurai (303) compared to Trichy (318). The government is speeding the energising of pumpsets (by March 31, 18,000 have been energised and aluminium conductors are awaited to energise a fur-

ther 12,000): The government is also revising downward the levy rates in Thanjavur and Tiruchy, taking into account that of the 3.5 lakh acres of Thaladi, 50,000 acres in Mannargudi, Thanjavur, Pattukkottai and Orathanad Taluks have gone dry. In addition, the Assembly approval the Tamil Nadu Indepted Agriculturalists (Temporary Relief) Bill under which farmers who had incurred debts to tide over the financial crisis caused by the crop failure (provided they are not income tax payers or have borrowed from Banks) are granted relief from Court action for this period. The State faces another critical 3 to 4 months of this drought situation.

*Power*: As forecast in the last issue (p. 196), the power situation in the State worsened in March and on 4 April, (a) the 60 percent cut was raised to 75 percent, (b) all non-continuous and non-essential industries were asked not to draw power from the grid for the rest of the month after which they can draw 25 percent of their need, and (c) continuous process Industries were asked to reduce the load to the minimum and be ready to close down at 48 hours notice. In addition the ceiling on domestic consumers was reduced from 250 to 200 units, power to shops stopped at 7-30 p. m. and the cut on street lights increased from 50 to 60 percent. The long run causes of lack of planning of power generation and lack of matching of demand increases with generating capacity have been analysed in earlier issues of the Bulletin. The immediate cause for this serious cut back is the breakdown in Thermal power plants and the assumption that the earlier 60 percent cut will reduce demand to 18 million units a day had proved false. Agricultural demand has kept increasing so that consumption has been nearer 20 million units. Against this demand factor, in early April, a breakdown of the Neyveli excavation machinery led to a reduction of supply to 3 million units against the expected 7 million units. At the same time the Ennore station's defective generators (see Vol. V. p. 196) led to a generation of 2.8 million units instead of 5 million units. With Basin Bridge providing 1.2 million units, the generation from Hydel sources had to be an excessive 8-10 million units instead of half of that, if the 330 million units of the hydel storage is to last till the end of June, when the monsoon starts in that area. The result of the power cut has been most serious on industries which have had to lay off 1.5 to 2 million workers, disrupt their export schedules and close down in many cases. The Small Industries report laying off 1 million workers and loosing Rs. 5 crores a day, the textile mills function at 30 to 40 percent capacity, with a lay off of 1.2 lakh workers and a daily production loss of Rs.60 lakhs, particularly in exports, South India viscose was working to 50 percent capacity as was the Simpson group, the Ennore Foundries had to close down as did Standard Motors. Ashok Leyland, MRF and cement industries were functioning on limited power made available by Kerala and Karnataka. Kerala which was to supply 50,000 units daily, began supplying 120 lakh units during April and May for cement needed for the Idikki project and was considering supplying an additional 50 lakh units to the State in May. Karnataka is also supplying power to the tyre factories in the State in return for the supply of truck and bus tyres and tubes. Load shedding is being resorted to extensively in all parts of the State. In this desperate situation, the Union Ministry of Petroleum and Chemicals direction to the Oil Companies to meet adequately the demands for diesel from industrial consumers, exclusively for powor generation in Tamil Nadu and other States where the power cut exceeds

20 percent is welcome. The captive diesel power sets in the State will require an additional 20,000 kilo litres costing an additional Rs. 2 crores (in addition to the normal 68,000 kilo litres). This will help the textile industry which is functioning at 30-40 percent capacity and the engineering units working at 50 per cent capacity. The cement, tyre and tubes and all small industries remain seriously crippled. It is unlikely that the 75 percent power cut with its serious impact on industries in the State will be lifted before July-August, when the monsoons arrive. Under these circumstances the long term plans for the second mine cut at Neyveli and a second or expansion of nuclear generation plant as well as the short term plan of maintaining the thermal stations and Neyveli in sound and efficient order are imperative. The maintenance of the thermal plants and the stock piling of necessary spares to prevent breakdowns are within our immediate scope and action and this should be undertaken. The government's decision to postpone the setting up of the Power Generation Corporation (See Vol. III p. 773 and Vol IV p. 478) in this situation is sound.

For the Country as a whole, the power shortage also worsened - though not as badly as in this State. Because of the shortage in the Linganamakki reservoir followed by the closing of the Munirabad station, Karnataka increased its power cut on April 1 from 35 to 40 percent. Andhra's Kothagudem thermal plant breakdown in April imposed power cuts. Haryana cut its power supply to all industries from March 8. In U.P. the power cut led to the closing of several mills. In Maharashtra, the power shortage and the variable cut is estimated to cause a loss of Rs. 3.5 crores a day in industrial production. Gujarat also has had to impose a 15 percent cut since April 15. Thermal power generations in the Country increased last year by 13 percent but hydel stations have performed badly. Of the additional 1,72 0 MW generated last year 1,165 MW was Thermal, and for this year capacity expansion will be 2,600 MW of which 560 MW will be in the Sourhern region. LIC made a loan in March of Rs. 2 crores for the Iddikki project in Kerala so that the first—the three 130 MW units—can be commissioned next year. Karnataka is pushing ahead with its plans for a 220 MW thermal station at Mangalore. In U.P. the third 120 MW unit was commissioned at Badarpur at the end of March. A neglected source of energy is the country's 235 sugar factories which if assisted in replacing their low pressure boilers by turbines and high pressure ones, can produce 350 MW per day. This is a source that should be tapped. The government has announced plans in the next (sixth) Plan to set up super thermal power stations (500-1,000 MW) at the pit heads of major coal fields. Similarly the department of Atomic Energy's new profile envisage 6-8 million KW of nuclear Power capacity by 1990, involving commissioning 15 stations at a cost of Rs. 2,500 crores. These are long term plans, on which advance action must be taken now.

*Inter State levels of Development* : Similar to the Inter-State study last year (see Vol. IV pp. 342 344), the Economic Times analysis of selected Socio-Ecomomic indicators for the States (March 20) shows that Tamil Nadu is falling behind in all indicators except in value added, where it stands fourth (after Maharashtra, West Bengal and Gujarat), though even here the year used (1969) was a good one for this State, and bank credit per capita where it stands second, only after Maharashtra. In per capita income, it is nearly half that of Maharashtra, Punjab and Haryana at a low Rs. 644 and low per capita and

industrial consumption of electricity. An interesting feature of the study is the rapid development of Karnataka which is ahead of Tamil Nadu in industrial electricity consumption, deposits per capita, number of banking offices and number of motor vehicles.

*Land Reform Legislation*: The February-April Session of the State Legislature passed certain bills in the area of land reform. The Legislative Council approvad the Tamil Nadu Land Reforms (Fixation of Ceiling on land) Amendment Bill approved in December 1974 by the Assembly (see Vol. IV p. 73), withdrawing the celling exemption for sugar cane lands and tightening the conditions of exemption for plantation owners. The Assembly also passed the Tamil Nadu Land Encroachment Act which confers appellate powers on departmental officers and so reduces unnecessary delays in implementation. The Assembly also approved the Occupants of Kudiyiruppu (Protection from Eviction) Reenactment Bill which puts the kudiyiruppu Act permanently on the statute book and protects farm workers of occupying kudiyiruppus after June 19, 1971. The passing of Tamil Nadu Indebted Agriculturists (Temporary Relief) Bill has been referred to earlier under the Drought section. Gradually the agrarian reform measures are being filled out. It is now necessary to consolidate these many bills in one Act and speed their execution.

*Transport*: Madras port traffic handling as reported earlier (see Vol. V p. 138) was over 80 lakh tonnes for 1974-75, which was a little less than over 3 lakhs compared to 1973-74. March 1974 recorded 8.37 lakh tonnes handled against 8.12 lakh tonnes in December. Using the lash type of cargo movement and starting on container traffic, the exports increased by 1.5 lakh tonnes and imports by 1 lakh tonnes. The Southern Railway also reports the relaying of heavier poundage rails and concrete sleepers to carry heavier loads at greater speed. The Madras-Vijayavada run will soon carry 4,000 tonnes weight train. The remodelling of the Central Station and the quadrupling of the Basin Bridge Vyasarpadi routes are under way. On the other hand, the highways programme faces some contraction as only Rs. 20 crores against the required Rs. 75 crores have been allocated to it for the Fifth Plan. This means some 500 major and minor spill over highway works will be the main programme, including the new Buckingam canal and Pamban bridge; reconstruction of culverts and erecting of by passes in district headquarters.

*District Development Corporation*: As declared in last year's Budget statement (see Vol. IV p. 256), the government had decided to extend the establishment of District Development Corporation from 4 districts to all 14 districts as one means of countering the small size of the Plan for the second consecutive year. The Corporation with the Collector as Chairman will raise non-tax resources for executing rapidly the various agricultural and industrial projects which have been planned in the district plans (see Vol. III pp. 155-156, 225-227, 309-312 and 396-398)

*Drinking Water*: The problem of drinking water in the urban and rural areas became serious in March and April. Madras city which received water only once in 2 days in limited quantities expects some relief by June from the Palar Water Scheme. The delay in the Veeranam Project by nearly a year has been critically commented on by the Assembly's Committee on Public Undertakings which has issued instructions for completion of the project by the end of the year. The Union authorities have released Rs. 2.

crores to hasten the project. With both these schemes, Madras water supply will be 120 mgd against the needed 204 mgd. This also points to the need for negotiating with Andhra Pradesh on the Somasila Project using the Krishna water, on which the government took a fresh initiative in April. In the rural areas the water table has fallen to the point where the 1,600 bore well programme faces the problem of not being able to raise water. The developing joint project with Kerala like Parambikulam - Alyar project is again stressed. For this State, both water and electricity demand an extra-State-a regional-approach.

## National :

*Fifth Plan - Second Annual Plan* : The Second Annual Plan (1975-76), is, as referred to under the Union Budget section in the last issue p. 201, established at Rs. 5,800 crores. Its aims are defined, as (a) meeting short term and long term needs of the economy under conditions or stability, (b) an overall growth, rate of 4.5 percent against last year's 1-2 percent, (c) an industrial growth rate of 7-8 percent, against an estimated 4 percent for last year and (d) agricultural production growth of 4-5 percent against last year's 1 percent. To attain these aims the plan proposes (a) to concentrate investments in agriculture, essential inputs like fuels and fertilizers and mass consumption goods, (b) to ensure fuller utilisation of capacity to pay special attention to quick yielding projects while preparing the long gestation ones, (c) to execute realistic State agricultural production plans and (d) to reduce non-plan expenditures. The investment priorities leave some gaps as in steel and heavy machinery, and no effective measures are proposed to effectuate reduction in non-plan non-development expenditures.

*Prices and Anti-inflation* : February and March witnessed a continuing decline in wholesale prices. For the week ending March 29 the wholesale index stood at 306% with a continuing price fall in wheat and rise in rice, a decline in industrial raw materials prices, particularly of raw groundnuts, with other items holding steady or marginally declining. This slow down in the rate of inflation is seen in the level of inflation of 31.9 percent in September 1974 having declined to 8.1 percent at March 22. For 1973-74 it was 30 percent and for 1974-75 it was 7·7 per cent. The positive side is that the price decline, continuing after December, is not simply the usual seasonal decline, the negative point is that the decline has not yet reached retail prices, except in the case of textiles. Tyre prices were adjusted, those for cars, scooters and motor cycles being upped by 2-3 percent and those for heavy duty vehicles rising by 5 percent. The anti-inflationary policies summarised in the previous issues have continued. The three anti-inflationary laws and action against smugglers (See Vol. IV p. 583) and the control on credit expansion are continuing to have their effect. In 1974 credit expansion was Rs. 852 crores against Rs. 1,492 crores for 1973. Borrowing from the Reserve Bank declined by Rs. 46 crores compared to the previous year's increase by Rs. 202 crores. The 75 large houses which had 24 per cent of bank credit in 1969 July had only 15.2 percent by early 1974, while that to agriculture, small scale industry transport operators and retailers had increased 4 fold from Rs. 441 crores to Rs. 1,746 crores during the period. The budget continues the process of mopping up resources. The 1 percent exise introduced for this year, (from which food products and preparations and electric light and power are to be exempted) will be raising double the revenue forecast, Rs. 50 crores rather than Rs. 24 crores. The prospect,

now confirmed, of a good rabi crop also has a positive effect in keeping prices rise down. The Union government's project for 3 tier supply of essential goods (See Vol. V p. 75) is being readied to be launched in the Delhi area, including preparing commodity budgets, correlating actual productions through advance planning, tie up of raw material requirements and infrastructure of power, transport and finance and a sound distribution net work. It should be extended to other major urban and rural areas rapidly. Alongside of these various control measures, around October the financial and fiscal instruments should be used to reflate the economy and expand essential goods production. Also there are some important negative elements in the picture which need to be watched and regulated. One is the inventory situation. In both the public and private sectors, there seems to be a continued build up of inventories. The Committee of Public Undertakings in its 40th report records that 55 public sector units had a total inventory of Rs 873 crores in 1967-68, and 84 of them increased their inventory to Rs. 1,800 crores in 1971-72. The RBI study (March 1975 Bulletin) reports that 385 large public limited companies had an increase of 12.9 percent in their inventories in 1973-74, compared to a 6.8 growth in 1972-73, which meant increasing from Rs. 1,726 crores to Rs. 1,949 crores. This trend is disturbing and must be controlled. A second negative element is the DAs due to the Union Government employees. Since the last DA payments when the index stood at 272 (See Vol. V p. 141), under the old formula 5 more instalments are due as the index now stands at 306 points, which is an impossible situation for government finances, and on which negotiations are now underway between the employees union and the government. A third element is the need for financial discipline in State finances. The large overdrafts for 2 States was referred to in Vol. V p. 141. Fifteen of the major States have presented and had approved by their legislatures budgets for 1975-76 involving a total deficit of over Rs. 200 crores—ranging from Rs. 37 crores for Maharashtra, Rs. 31 crores for M.P. to Rs. 3.2 crores for Gujarat. Small surpluses of Rs. 0.20 lakhs have been shown by 3 States only, 7 States have proposed additional taxes. The RBI overdraft situation of the State government as at April 11 is Rs. 412 crores compared to Rs. 270 crores on April 12, 1973. Both the Union and State governments must manage their finances to avoid fuelling further inflation.

*Industrial Growth* : The industrial growth as evidenced in the CSO estimate available upto September 1974 showed a still poor performance in 1974 as pointed out in every issue of Vol V including the last one (p. 203). CSO estimates for the first nine months of 1974 at 114.1 in September (new base 1970 = 100) records an increase of 2 percent for this period over the first nine months of 1973 It is likely that we will be stuck with this 2-3 percent growth for 1974-75. The Union Government also refers to the most recent information available to it and concludes that for the period April-December 1974, growth in industrial production is 2.5 percent compared to 0.6 percent during the same first 9 months in 1973-74. The Government also basing itself on the better performance of coal, power, steel and its concentration in fuller utilisation of existing capacity forecasts that for 1975-76, the industrial growth will be 7 percent. This is more than a 300 percent jump over the 1974-75 performance and there has to be a special disciplined effort if this target is to be reached. The Economic Times annual survey of the industrial performance of 350 industrial firms for

1973-74 presents a mixed picture and provides no basis for the governments prognosis. It points out that there was higher assets formation in 100 large private units at 11 4 percent in 1973-74, compared to 7-8 percent in each of the 2 previous years. But a major factor in this higher rate of assets formation is due to the faster growth of inventories which was 14.5 percent (as pointed out in the previous section), while productive capital increased by only 10 percent, net worth by 8.2 percent, sales by 7.7 percent and gross profits at 10.9 percent. This is also corroborated by the better performance of 100 medium private units, 11.3 percent growth in assets, 11.8 percent increase in turnover and 40 percent increase in gross profits. From the point of view of profitability, 1973-74 was a good year, with gross return on capital at 10.9 percent, gross return on sales at 11.3 percent and net return on owned funds being 10 9 percent — all bittering the previous year's performance. Also this good performance is widly scattered over shipping, chemicals, man made fibres to paper, drugs, textiles and tyres.

*Public Sector Performance*: The government reports that during the 11 months period April 1974-February 1975. the public sector undertakings achieved 92 percent of their production target, their February production being Rs. 57.85 crores (which was 108 percent of January). The growth in public sector output for April-December 1974 is reported at 12.7 percent, the heavy industry growth alone being a high 41 percent. The 1975-76 budget proposes, as noted in the last issue (p. 200), a public sector investment Rs. 555.36 crores compared to Rs. 484.99 crores in 1974-75 with reductions in steel, FCI and aluminium and increases in coal and cement. The ministry reports that it expects a fall in profits in 1975-76 to Rs. 274.76 crores against total investment of Rs. 3,424 crores compared to last year's profits of Rs. 414.56 crores for a total investment of Rs. 2,861 crores. The Economic Times analysis reports that in 1973-74 there was an increase in the number of profit making public sector units from 50 to 55. The 55 made a total profit of Rs. 155.5 crores and 37 of them improved their profits. Its analysis notes that the net profit for that year of all public sector enterprises was Rs. 141.5 crores compared to Rs. 17.3 crores in previous year. The Bureau of Public Enterprises estimated that the net profit for 1974-75 would be Rs. 150 crores, that the sales turnover would be Rs. 6,777 crores and this year's profit target is established at Rs. 200 crores. The public sector units are thus beginning to turn the corner from the point of view of profitability.

## National Production Front:

*Steel*: All reports in March and April from SAIL and HSL are to the effect that 1974-75 was a good year for steel production in the Country. Production of saleable steel by the 5 integrated steel plants was 4.89 million tonnes on March 31,1975, which was an increase of 5.4 lakh tonnes or 12.5 percent over that of 1973-74. In addition, the mini steel plants, Mysore Iron and Steel and Durgapur Alloy Steel Plants produced an additional 8.3 lakh tonnes so that total steel production was 5.72 million tonnes. Steel Imports amounted to 8.77 lakh tonnes so that the steel availability in the Country was 6.7 million tonnes, an increase of 24 percent over 1973-74. All plants shared in this improved performance. Bhilai's performance was the best with an increase of over 1 lakh tonnes. followed closely by Rourkela which increased its output by 90,000 tonnes. In the case of Durgapur, its saleable steel production increased by 80,000 tonnes and its Alloy steel plant

ingot production went up to 78,359, representing a 78.4 percent capacity use, turning its annual losses into a Rs. 1 crore profit. Its product mix is thus being changed to meet the special steel demand and the old controversy over its relation to Salem is being revived. TISCO'S production also expanded by a high 3 lakhs, and IISCO's increase was 90,000 tonnes. This good performance was due to improved management, less disco-ordination of the railways, coke and coal deliveries, power availabilities during the year, pragmatic planning and better industrial relations. Some results are the internal availability of steel has increased, the stock piling of inventories in the plants has decreased and the system of distribution is being changed from direct supply from the plants to the bulk consumers (800 major steel consumers buy 200 tonnes or more than a wagon load at a time) to purchase at the stock yards. The major consumers do not like this because it means a higher price (Rs. 200 – 700 per tonne) and some delay till the stock yards are properly staffed and structured. But it is a move in the right direction as the large plants cannot undertake retail supplies even in large quantities. In addition to cutting back on imports which are now limited to special categories not produced within this country for priority sectors like electric steel and special steel increased exports of steel during the year earned Rs. 45 crores. The outlook for further increases in production, exports and reduction in imports for this year seems hopeful. Progress in Bokaro has also been good. The blast furnace is working to capacity, the slubbing mill has been commissioned and by the mid year the hot strip mill will be commissioned. In February, Bokaro produced 2,178 tonnes of hot metal a day against its rated capacity of 2,640 tonnes. Its quality was good and Bokaro has already entered the East European export market in advance of its production. The role and function of SAIL Internationals Steel Bank is under review, as it has not quite taken off. Industrial units are not using its services and there are many road blocks in the way that have to be removed.

*Crude*: In early April, the Prime Minister inaugurated the test production of a well at Bombay High, and by 1976 Bombay High will be producing 1 million tonnes a year, and when all the wells are in operation by 1978 around 10 million tonnes a year. Also by that time, plans should be in operation for using the natural gas of Bombay High mainly for cooking and for some industrial uses in Bombay city and Goa and parts of Karnataka. Drilling is to begin in a fifth well in Bombay High, two more offshore areas in the Bay of Bengal and in offshore Kutch, along with a third area stretching from Saurashtra to Lakshadeep under contract to an international company. The second oil drilling rig now being reduced in Norway will be used for this. At the end of March ONGC also started drilling at Mandapam in the Ramanathapuram district, the first well being drilled to a maximum depth of 4,000 metres. This is part of the offshore drilling in the Cauvery basin stretching from Pondicherry to Kanyakumari, for which the satellite guided seismic ship Anveshak purchased from the US will be deployed, and the Canadian firm Asamera of Calghery is being coctracted to begin exploration over an area of 5,000 sq km out of the total 26,000 sq km. On onshore exploration, drilling is starting in the Kashmir Valley where deposits of oil and natural gas have been located. While some wells have been closed in Assam for repair and maintenance purposes, 3 new oil locations in Assam are developing well. The government's assessment is that the Country has

80,000 million cubic metres of gas and 182 million tonnes of Oil reserved on the basis ONGC and oil India exploration and that indigenous production should be increased from 7.5 million tonnes, today to 12 million tonnes by 1978-79. Crude oil imports for 1974-75 were 7 lakh tonnes less at 13.63 million tonnes against the planned 14.32 million tonnes, because of the successful economy measures and differences in freight rates and rate variations. The economies saved the Country about Rs. 200 crores in 1974 imports, which were 14 million tonnes. They included (a) reduced consumption of petroleum products at 21.67 million tonnes against an anticipated 25 million tonnes, through control of inventories and a proper distribution net work, (b) optimising refinery yields so that middle distillates went up to 48.8 percent from 47.8 percent in 1973, and (c) reduced fuel consumption, by 21.5 percent in petrol, 17.6 in kerosene, 16.5 percent in diesel, 6.8 percent in furnace oil and 22.4 percent in luber and grease, (the rate of increase of diesel consumption, however, doubled mainly due to prevention of its adulteration with kerosene). Naphtha production increased sharply, but as the fertiliser factories were not ready to use it, 1.2 lakh tonnes of naphtha, 10,000 tonnes of bitumen and 3,000 tonnes of lube were exported for the first time in the Country's history, earning Rs. 37 crores. For this year, 1975, it is estimated that the total crude import will be 15 million tonnes, of which 8.7 million tonnes will be directly imported by the government from the producing countries (Saudi Arabia 1.1 million tonnes, Iran 3-8 million tonnies, Iraq 2.8 millon tonnes and Abu Dhabi one million tonnes) compared to the 1974 direct import of 4.4 million tonnes. This increased direct import by the government is because of the oil credits extended by the producing countries—for this year Iran, Iraq and Abu Dhabi will provide Rs. 230 crores. It is important that this facility should not be used too freely, as it mortgages the country's future plan resources. The remaining 6 million tonnes of crude will be imported by Hindustan Petroleum, Caltex and Burmah Shell, with which negotiations for take over are under way and which has been instructed not to sell its assets before the take over. The oil import bill in 1974, for the 14 million tonnes of crude and 2.9 million tonnes of petroleum products amounted to Rs. 1,124.87 crores. This burden—which is more than one third of the value of our total exports—must be further reduced this year, through increased indigenous production, further cuts in crude consumption and development of substitute sources of energy. One such source is the Gobar Gas and Bio Gas plants using animal and vegetable wastes, whose initial problems of inadequate or impure gas, toxic smell and high costs must be speedily overcome through adequate R and D efforts. On the international front, OPEC countries have noted a fall in crude oil demand in 1974 by 3 million barrels a day due to consumer resistance and use of substitute energy sources. Abu Dhabi has decided to reduce its price by 55 cents from 11.2 a barrel. The floor price of 10.46 per barrel is being maintained by all OPEC member countries, who have under constant study the fall in the world demand for crude.

*Coal*: March and April reports on coal production were good. It is estimated that the 1974-75 output surpassed the target of 80 million tonnes; with CMA producing 61.10 million tonnes compared to the provious year's 53.46 million tonnes BCCL producing 17.6 million tonnes (16.34 million tonnes in the previous year), Singareni 6.30 million tonnes (5.31 million tonnes the previous year), and TISCO and IISCO's captive mines producing 3 million

tonnes (2.76 million tonnes the previous year). The result is that coal availability has sizeably increased to 21 million tonnes at pitheads (instead of 6. 2 million tonnes), to 21 days stocks in power houses (instead of 2-3 days stocks), to 8 days stocks for steel plants (instead of 3 days), and to 26 days for cement plants. Coal loading on wagons and performance of washeries have similarly improved. There are 2 problems facing the industry. First the non-payment of dues by steel plants, power houses, and Railways amounting to Rs. 48.25 crores which is imposing a financial strain on the industry. Second the price factor is depressive element. Towards the end of March, the Chakravarthy Committee recommended a price increase of Rs. 18 per tonne for non-coking coal and Rs. 25 per tonne for coking coal to meet the higher wage cost (70 percent) and other input prices increase (30 percent). The public sector will bear the major impact of this second increase for non-coking coal and fourth for coking coal since nationalisation. On top of this, Singareni has stalked its right to fix its own prices. CMA has also started work on 4 low temperature carbonisation plants at Talchar, Raniganj, Kakona and Singareni for producing coal gas as a substitute energy source for crude oil.

*Drugs*: Drug production and the industry have been the subject of nation l debate and study in March and April in a series of regional seminars, and through the Hathi Committee. Foreign drug companies, particularly multi nationals, dominate the drug formulation sector which is the profitable sector. In late March one such multinational company was able to force the government to allow it to choose its raw material for a life saving drug from its own sources. Now there are a series of recommendations made by the Hathi Committee to the government to deal with this situation : (a) Foreign drug companies are to reduce heir equity holdings to 26 percent in a phased manner, with the government and financial institutions taking over the rest : (b) A National Drug Authority with wide power, to fix prices, allocate raw materials, import bulk drugs and ensure horizontal transfer of technology is proposed. It will be financed by a 2 percent cess on total sales of drug units : (c) Price control is to be simplified, lifting control from units with a Rs. 1 crore turnover, from 13 essential drug formulations to be produced without brand names, and from bulk drugs, and limiting price control to 453 products, their ceiling price being based on the production costs and a return of 8 to 13 percent on capital: and (d) A more intensified R and D, particularly adaptive R and D programme, and for which the government plans to start 5 regional laboratories to serve both the public sector units (HAL & IAPL) and small units to develop their own formulations, test them for toxicity and improve their production processes. The bigger firms with over Rs. 1 crore turnover should set up their own R & D units. The government's decision on these recommendations are awaited, including the subsidy of essential drugs.

*Sugar*: The issues are under debate with regard to the sugar industry. The first is the question of nationalisation of sugar mills on which the April report of Lok Sabha's Public Accounts Committee has asked for an immediate government decision, with a tilt in favour of nationalisation and a somewhat confusing statement by the Union Minister in the Lok Sabha on April 8, that the State governments are free to nationalise the factories which are not functioning properly. This sounds like passing the responsibility and the State's quandry given the constitu-

tional position on nationalisation will be discussed in the State industrial section. The second issue relates to sugar prices, with mounting pressure on the government both by the private sector and co-operative mill to increase the price of levy sugar. ISMA points out that the industry loses Rs. 60 crores on levy sugar and the 50 percent of the 5 percent increase in free sale sugar (the other 50 percent goes to cane growers) brings in Rs. 13.5 crores, resulting in a net loss of Rs. 46.5 crores. The Federation of Co-operative Sugar Factories (producing 40 percent of the Country's total sugar output) is even more insistent in pointing to the government's obligation under the Bhargava Committee and Tariff commission's recommendations to increase levy prices. The third issue of increased sugar exports is related to the prices question. In 1973, Rs. 42.50 crores of export earnings from sugar were recorded, and in 1974 they were Rs. 250 crores for 5 lakh tonnes, put of a total production of 40 lakh tonnes. For this year 45 lakhs tonnes are expected. The government would like to double this for 1975 to 10 lakh tonnes (as 1 lakh tonnes of sugar exported will pay for 5 lakh tonnes of wheat). But for this objective, there is need to increase the proportion of exports, which is now 12.5 percent of our production to something like 20-25 percent, increase the present proportion of 1/3 of our cane production which goes to the factories (425 lakh tonnes out of 1,400 lakh tonnes), and increase the amount of cane production by 10 percent from 1,400 lakh tonnes to 1,550 lakh tonnes. But for all this, either an increase in the levy price or a further increase in the free sales proportion is necessary to increase cane production and expand the capacity of the factories. At this point, the Rs. 24 crores due to the cane growers by the mill owners in UP and Bihar as at 15 February 1975 points to further government control and regulation.

*Cement, Textiles and modern bakeries*: The 1974-75 cement production is estimated at the same level as that of the previous year at 14.61 million tonnes against a capacity of 19.86 million tonnes. For this year the capacity will increase by a 2 million tonnes, and to achieve the Fifth Plan target of 25 million tonnes production and 29 million tonnes capacity, the 8 new plants with a capacity of 7.44 million tonnes which will go into production in the last 2 years of the Plan have been granted a retention price which will ensure a 14 per cent return on capital and both these and expansions a higher retention price of Rs. 10 per tonne. This should be matched by ensuring that power and coal supplies are available and export increased beyond the 3 lakh tonnes for 1974-75. On the textile front, in March and April, the 30 percent combined controlled cloth and exports obligation scheme was under discussion. The government wished to separate the scheme and insist on a 40 percent standard cloth production obligation: the mills complained of heavy losses from and lack of demand for controlled cloth, and the co-operative distributors and the public pointed to the sub-standard variety's being produced. What is needed is a clear standarised cheap cloth scheme whose production should be obligatory on all mills and the decentralised sector. In early April, the pilot nan making plant of Modern Bakeries was commissioned in Delhi. This could be the start of a cheap and nutritive bread programme if atta, cereals, spices and other starch were used to produce the bread.

*Agricultural Production*: The rabi crop for this year is expected to be at a record 44 million tonnes, including 27 million tonnes of wheat. Rice production for

the year has been around 40 million tonnes (with oil seeds at 86 lakh tonnes and sugar cane at 140 lakh tonnes). The government has fixed the rabi procurement target at 5.5 million tonnes, and the procurement price at the same level as last year of Rs. 105 per quintal of wheat, as recommended by the Agricultural Price Commission which the government accepted in order to keep inflationary pressures down. In addition, a bonus scheme is operating under which for the first 50 percent of the target fixed for each State, the bonus will be Rs. 2 per quintal and for the next two 25 percents, it will be Rs. 5 and Rs. 10 per quintal. Each State will decide on its own procurement method as etween (a) preemptive purchases in regulated markets which all States will use but the regulated markets being few will be inadequate in yield: (b) levy on traces which failed as the instrument last year: (c) monopoly purchase which also was unprepared and failed in 1973-74. The APC has recommended a system of compulsory graded levy on the producers, millers and hullers, supported by full political backing and administrative arrangements. This will be the most effective procurement policy. APC also points out that the adequate functioning of the public distribution network in rural area, drought prone areas where the weaker sections live will require procurement of 12 percent of cereal production or 12 million tonnes. This is the distribution target for 1975. Despite last year's low procurement at 1.917 million tonnes being below the target of 4.531 million tonnes, and kharif rice procurement this year lagging at 2.972 million tonnes plus 2.25 lakh tonnes of coarse grains, last year's target of 4 million tonnes will be attained because of the late start of the kharif harvest. With an import of 5.4 million tonnes of cereals, of which 4.6 millions were purchased commercially and the rest on concessional terms from US, Canada and EEC, by the end of April the government stock of food grains was 5 million tonnes. With the rabi procurement target of 5.5 million tonnes, the government should aim at holding a buffer stock of 8-9 million tonnes as the best counter against crop failures, (production below 108-110 million tonnes) and inflationary pressures. The 1974-75 report is that the total food production was 103.6 million tonnes, including an export of basmati of 42,000 tonnes and 3,000 tonnes pulses, compared to 97 million tonnes in 1973-74. 10.6 million tonnes were distributed through the public distribution system in 1974. Reports from U.P., Rajasthan and Madhya Pradesh show that the rabi crop is substantially larger than in 1973-74, while production in the Punjab is expected to be around 54 lakh tonnes against last year's 48 lakh tonnes, and Haryana, West Bengal, Andhra Pradesh and Karnataka also record satisfactoy crop conditions. The government reports the creation of 11.4 million hectares additional irrigation potential during 1974-75 as part of the 6.2 million hectares targets of the Fifth Plan. To ensure its use, fields channels, drainage facilities, land preparation and farmers training should be provided. On the fertiliser front,production is increasing from 1.2 million tonnes in nitrogen in 1974-75 to 1.8 million tonnes this year and from 3. 5 lakh tonnes of phosphates to 4 lakh tonnes. With the commissioning of the new plants at Kalol, Barauni, Namrup, Tuticorin and Mangalore, capacity will increase from 19.39 lakh tonnes to 24.64 lakh tonnes, and fertiliser imports can be reduced by 10 to 15 percent. On the other hand, the demand for fertiliser has fallen sharply in Maharashtra and Gujarat by 40 percent and Andhra Pradesh and Karnataka by 30 percent, mainly because of farmer's resistance to the sharp rise in its prices. The price factor calls for urgent attention if the gains of the new technology are to be conserved.

*Exports and Imports* : March and April reports indicate that exports for the first 11months of 1974-75 did well at Rs. 2,918 crores-with the certainty that for the year export earnings will exceed Rs. 3,000 crores, being a rise of over 30 percent, with import costs rising even faster to Rs. 3,786 crores by 47 percent, thus indicating an unfavourable trade gap of Rs. 808 crores, which might well exceed Rs. 1,000 crores for the year. The 1973-74 trade deficit was Rs. 400 crores. The reasons are known. On the export side the increased earnings have been due to international inflation which is slowing down, and with the recession in developed countries, calls for intensive efforts by production units in the Country if the 1975-76 production target of Rs. 3,400 crores is to be attained. Special expansions must take place in sugar, engineering goods and other items of traditional and non-traditional exports. The government's liberal import policy announced in early April should help in this. Its innovations include reversing the trend of import canalisation, (12 items have been decanalised), increasing the ceiling of free foreign exchange to Rs. 10,000 for small industries, permitting a system of automatic licencing on the basis of last year's consumption, liberalising the policy of nomination by registered exporters and increasing the ceiling on emergency license for spares. Similarly the scheme for export house eligibility has been tightened, so that the real strong export houses are active. The export performance of particular commodities underway or planned is encouraging. For this year 6 lakh bales of raw jute is being exported from the saving of the consumption of our jute mills. Engineering exports for 1974-75 are estimated to exceed Rs 300 lakh including Rs. 10 crores through bicycle exports during the first 7 months, and the 1975-76 target is being raised above the Rs. 300 lakh level with an action panel working on increasing exports to West Asia and giving effect to the Sandhi Committee recommendations, on which a first decision has been taken in allowing an automatic growth rate of 5 percent for certain types of industries. As hinted in the Coal section plans are under way to export 10 lakh tonnes of coal this year 1975-76. Also cement exports last year earned Rs. 10 crores and for this year it is planned to earn Rs. 30 crores. During the first ten months of 1974-75 plastic exports increased by 50 percent to Rs. 12.28 crores, with the South contributing Rs. 1.42 crores. On the iron ore front, in early April, 11 nations (India, Algeria, Australia, Chile, Mauritania, Peru, Philipines, Sierra Leone, Sweden, Tunisia and Venezuela) joined together to form an exporters' association to promote consultations among iron ore producing countries. Brazil and Liberia are likely to join, while Canada has refused to do so. India has signed a long term agreement with Japan under which 10.05 million tonnes will be exported in 1975-76 (against 6.2 million tonnes in 1974-75) as part of 61.26 million tonnes to be exported over a 9 year period at a sensible increase in price. On the other hand India will be importing urea fertiliser from Japan to meet the country's demand of 29 lakh tonnes of fertilisers, of which only half is produced within the country. STC reports a record turnover of Rs. 879 crores in 1974-75 including its turnover of Rs. 786 crores, that of Cashew Corporation of Rs. 37 crores (Rs. 35 crores last year), Project Equipment Corporation Rs. 30 crores (Rs. 18 crores last year) and Handloom and Handicrafts Corporation of Rs. 26 crores (Rs. 20 crores last year) involving a 68 percent increase in exports. MMTC on the other hand reports a fall in its off-take which should be met by cutting back on imports of non-ferrous metals and steel. India and ECM have concluded an agree-

ment on textile exports for 1975-77, which is not very favourable as yet. The March-April, India-USSR discussions on finding a basis for the Rupee-Rouble parity which for non commercial transactions have been fixed unilaterally by the Soviet auth-rities have not as yet resulted in an agree-ment.

*Aid*: On the basis of the 1974-75, trade deficits of Rs. 1,000 crores which is likely to increase in 1975-76, the World Bank study of India's aid requirements for 1975 - 76 computes India's foreign exchange needs as $ 2.5 billion (Rs. 2,000 crores) and recommends to the Aid India Club which will meet on June 25 in Paris, 26 fresh aid commitments totalling $ 1.5 billion. In 1974 - 75 aid commitments totalled $ 1.7 billion and disbursements amounted to $ 1.75 billion. The study refers to the good rabi prospects, the slow down in inflation and calls attention to more than Rs. 1,130 crores needed for crude imports (1974 - 75 figures), the higher price of the same quantum of ferti-liser imports, with some reduction in food and steel imports. The use of aid in the Country however, faces problems because the resource constraints in the first 2 Annual Plans have meant preference to ongoing and core sector projects and no rupee resources to projects selected by some of the aid givers. The French credit for the Paradeep fertiliser, for instance, cannot be used on it because the machi-nery is either available in the Country or at lower prices outside France. Also such tied aid cannot keep pace with galloping inflation and after the project work is completed, the cost of machinery has soared and the credit inadequate. Also some foreign aid projects are of low priority such as family planning or keeping alive some of the UK firms with tied UK aid. This is part of the problem develop-ment aid declining in quantity and quality, which the report of the Commonwealth Secretariat highlights. In quantity, the real value of ODA has fallen by 15 percent from 1972-73 and the terms and aid per head of recipient countries have fallen by 30 percent in the ten years since 1963. In March and April India concluded a number of aid agreements. To agreements with UK will provide non project goods such as raw materials and spares for industrial and agricultural project for Rs. 38 crores and Rs. 4 crores for 30,000 tonnes of food grains. In another agree-ment Japan will extend Rs. 1.7 crores as a long term credit for purchase of Japanese commodities and Rs. 29.8 crores for the Panipat fertiliser project in Haryana. Iran will grant $ 300 million credits to develop iron ore mines to export ore to Iran. IDA has given a credit of $ 75 million to the Agricultural Refinance Cor-poration for agricultural development. It has given a $ 34 million four year programme to improve minor irrigation, agro service centres and extension sources in West Bengal.

## International

*Bangla Desh*: On April 6, Bangla Desh demonetised its hundred taka notes and launched a drive against hoarders, black money dealers and smugglers in order to streamline the functioning of the eco-nomy. March reports show a fall in jute and jute goods exports. As against the export target of 2 million bales, at February 14 only 6,50,000 bales had been exported. The major event in Indo-Bangla relations was that on April 18 a short term agree-ment on the Farakka Barrage was signed, on the basis of which from April 21 India will draw 11,000 to 16,000 cusecs of water during April and May and Bangla Desh would use the remaining flow. On this basis discussions on fair weather drawals can be negotiated, thus breaking

a 14 year deadlock. Also in March the inland water transport service between Assam and Bangla Desh was initiated on a commercial basis. IDBI has granted Bangla Desh a 12 year credit of Rs. 4 crores for the import of textile, machinery and equipment to further improve its textile production.

*Pakistan*: In March, shipping delegations of India and Pakistan reached agreement on a tentative freight structure for commodities to be carried on the trade route under the India Pakistan trade protocol (See Vol V pp 149 and 210). It is based on the India-West Asia trade routes pattern. In April Indian and Pakistani trade delegations discussed extending to each other the tariff concessions to promote trade between the 2 countries, similar to the tariff concessions agreed at GATT India and Pakistan having no trade relations do not come under the GATT agreement.

*World Monetary Reform*: In view of the US dollar's continuing decline on international money markets, Saudi Arabia, Iran and Kuwait severed the link between their currencies (Dinars and Rial) and the US dollars, and are expressing the link in SDRs. Also in March, Chile devalued its currency the escudo, three times in relation to the U.S. dollar involving a total devaluation of 40 percent.

*World Bank and its third window*: As stated at its Annual meeting at Nairobi in 1973 (See Vol III pp 713-714), the World Bank plans to provide credits of upto $ 7,200 millions by July 1, 1980 to increase agricultural production. By then it would be lending twice its present amount at $ 1,000 million per annum to promote rural development, particularly to help the small and poor farmers who are at the core of the 40 percent poorest in the development world. As part of this strategy, the Bank plans to open a "third window". its first window being the normal World Bank credit at 8.5 percent interest, its second window being the IDA credit at 0.75 percent service charge. The third window will be loans at interest rates midway between the two (3-4 percent). The resources for this third window will come from the OPEC countries and will be devoted to the development of the most seriously affected countries as a result of the rise in food prices, oil prices, world inflation and recession in the developed world.

*OPEC funds and Oil problems*: IMF reports that the 17 OPEC countries trebled their exports in 1974 to 133 billion compared to 1973, with a trade surplus of $ 97 billion compared to the surplus of $ 23 billion in 1973. After allowing for imports which expanded from $ 21.3 billions in 1973 to $ 36 billion in 1974, trade credit and other transactions, they had a net sum of $ 56 billion for spending, investing and loaning, 37 percent or $21 billion went to the UK for investments in Euro markets, 20 percent or $ 11 billion was invested in U.S., 37 percent in other countries 6 percent in the IMF and World Bank. For 1974 the industrial countries' trade deficit was $ 67 billion ($ 21 billion in 1973), and the developing conntries, trade deficit was $ 26 billion ($ 12 billion in 1973). The $ 25 billion OECD solidarity fund (see Vol II p 150) to assist the richer countries who are in balance of payments difficulties has been agreed upon and is likely to be ratified and come into operation at the end of 1975. The OPEC countries had a summit meeting in harly March in Algiers to prepare for the Paris conference called by the French President. At Algiers the decision was made to link oil prices to prices of raw materials and capital goods, to cut oil back production if necessary and hold prices firm, if

not to increase them. There is a future problem for the OPEC countries, their current oil output of 27 million barrels a day against their capacity of 38 million barrels, may face a further reduction as countries and people economise on oil and develop substitutes. Libya has reduced its production by 60 percent. Against this background, the 10 day preparatory conference attended by US, Japan, EEC, (developed) Algeria, Iran, Saudi Arabia and Venezuela OPEC) and Brazil, India and Zaire (developing non oil producers) to prepare for a conference of the 3 groups on the problem of world energy called by the President of France in Paris in April failed to reach agreement as the agenda of such a conference. The developed countries wanted to concentrate the attention of the conference on the oil question and prices, where as the OPEC countries wanted all resources and development generally to be discussed. For the moment there will be no dialogue between the 3 parties on this vital issue.

*UNIDO Conference*: UNIDO's second conference in Lima after 14 days of discussions and negotiations established a long term strategy for the industrialisation of the developing countries. (a) Noting that countries representing 70 percent of the world's population had only seven percent of the world's industry, by 2000 AD the share of these countries should be increased to the maximum extent possible or atleast 25 percent of total world industrial production. This decision was adopted after prolonged negotiations with the developed countries which objected to it as being unrealistic. The attainment of this target will call for sustained mobilistion of internal resources, development of management talent by the developing countries and whole-hearted co-operation by the developed countries, (b) Again by a majority vote with US, UK, Japan, Germany and Canada voting against, it was decided to link the prices of the developing countries, exports with prices of their imports. (c) With a similar majority, the conference endorsed every State's inalienable right to exercise freely its sovereignty and permanent control over its natural resources, including nationalisation. (d) There were similar decisions on industrialisation guarantees for contracts signed with multi national companies from rich countries and the human aspects of industrial development. This UNIDO declaration is part of the programme of the New international Economic Order referred to in the last issue (p 211) and to be referred to in this section later. The views of the developed and the developing countries are becoming polarised, with the prospects of international co-operation for the attainment of the Order receding.

*GATT and ADB*: GATT's annual report for 1974, reports the lowest growth rate in world trade for 1974 (from 15 percent in 1973 and 5 percent in 1974) and warns of a decline in world trade in 1975 if OECD countries' economies stagnate. Inflation in the 23 OECD countries which account for 50 percent of world exports was 13-14 percent in 1974 compared to 1973. If however inflation is arrested and the developed economies move forward in the second half of 1975, there could be a 1-3 percent rise in world trade. What is needed is to end the uncertainty on the future of oil prices and prices in general for this upturn to occur. ADB's annual report records an aggregate trade deficit of $ 8 billion for 18 Asian countries, including India, in 1974. Within this group the deficit countries imbalance rose from $ 4.5 billion in 1973 to $ 12.3 billion in 1974. Primary commodity price trends except jute, sugar, palm oil and rice, in the first quarter of 1975 were downward, while the inward flow of capital stagnant at 1973 levels.

The external debt of the developing Asian countries increased from $ 31.6 billion in 1972 to $ 37.6 billion in 1973. The immediate needs for them are increased food production, full exploitation of domestic energy resources and exports diversification. The Tokyo round of GATT negotiations has set up 4 groups to remove non tariff barriers to world trade dealing with, (a) subsidies and counter vailing duties, (b) quantitative restrictions including import prohibitions and licensing procedures, (c) standards and marks of origin and (d) customs valuation procedures, documentation and fomalites. India is interested in group (b) — quantitative restrictions — which constitute the major obstacle to its total expansion.

*New International Economic Order*: The non aligned nations conference bureau met at Havana in March and established the position on the 25 percent industrialisation, sovereignty and nationalisations of resources and linking export and import prices which were presented and adopted by the UNIDO conference at Lima. In addition the Havana conference decided to establish a Non-aligned Solidarity Fund to help those countries which are most seriously affected by the current oil crisis and world inflation. Also it decided to finance the buffer stock programme worked out by UNCTAD and refered to in the last issue (see pp 212-213). If these last 2 decisions are given effect to, and they are within the means of the oil producing developing countries, and if at the special session of the General Assembly of the UN in September the Lima decisions are adopted with more of the support from the developed countries, then the New International Economic Order can become an effective instrument of development. In this regard the February-March meeting in New Delhi of the Economic and Social Commission for Asia and the Pacific (ESCAP) adopted an important declaration on the Order: (a) calling for a better distribution of income and wealth within and between countries, (b) noting the pledge of the developed countries to transfer resources to the developing countries and to aid the region to become self sufficient in food, (c) stressing the imperative of the developing countries in the region displaying the political will to improve their economies, and co-operate with one another in solving their problems of commodities and raw materials and for this to maximise the use of regional skills and (d) promoting social change calling for accelerated implementation of health, education, housing and water supply. This is good framework for the New Order.

*Law of the Sea Conference* : As agreed (See Vol IV p 592), the UN Law of the Sea Conference resumed its session in Geneva in March and was engaged in discussing the question of the authority which will exploit the rich resources in the ocean areas which lie outside the jurisdiction of individual States. For the present there is a moratorium on exploitation of sea bed resources because this question is unresolved. Once there is agreement on the method of and means of exploitation, there will be a considerable accretion to the world's supply of mineral resources.

*World Food* : The U.S. Department of Agriculture estimates that the world supply of wheat in 1974 decreased by 20 million tonnes to 346.8 million tonnes (366.5 million tonnes in 1973) mainly due to a 24 percent reduction in the Soviet crop, 22 percent decline in Argentina and 3 percent in Australia. World maize declined by 12 percent as both U.S. and USSR had poor harvests. Rye and Barley production increased marginally. Under these conditions, it is encncouraging that the International Wheat Council has agreed on an

integrated wheat stock piling programme as part of a new world wheat agreement. The stock pile should be held by UNCTAD and not IWC.

*ESCAP*: The Economic and Social Commission for Asia and Pacific meeting in Delhi referred to earlier also decided on some concrete Inter-Asian projects. (a) An agricultural machinery Institute is to be set up in the Philipines, (b) A centre for research and information on the role of women in development is to be established in Iran and (c) an Asian centre for the transfer of technology including its adaptation and absorption in the country is to be set up in India. It also decided to change the name of the Asian Institute for Economic Development at Bangkok into the Asian Development Institute and endorsed the functioning of the two other Institutes — the Asian Statistical Institute in Tokyo and the Asian Centre for Development Administration, Kuala Lampur.

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# II Agricultural Development

## Paddy production and food grains availability:

The fears for the agricultural and food grains production in the State expressed in the last issue (see p 214) have more than come true. The total agricultural production for 1974-75 is 75.23 lakh tonnes, which is a 35 percent shortfall over 1973-74 production. The Kuruvai crop which produces 12 lakh tonnes, produced in 1974 only 6.5 lakh tonnes. The Samba harvest was almost over in April and instead of the expected to 40 lakh tonnes, 27 lakh tonnes of paddy have been produced. The Navarai which is usually grown over 2 lakh acres in North Arcot has been grown over only 1 lakh acres and 50 percent of this crop has withered due to lack of water. Of the 28,000 acres of Navarai Paddy in the Vellore Taluk, only 50 percent will survive. This means that the summer rabi programme referred to hopefully in Vol IV p 154 has failed because of the fast sinking water table and the acute water shortage. The Cumbu crop has also declined by more than half because of extreme drought conditions. Both rice and coarse grains are thus in deficit by over 50 percent. That is, food grain production has fallen to 51 lakh tonnes against the anticipated 77.30 lakh tonnes—a short-fall of 26.30 lakh tonnes. Under these conditions short term and long term measures are needed and are being taken. The immediate problem is to obtain more food grains. The Union Authorities are providing over 50,000 tonnes wheat and this should be popularised in the State. By

the end of March they had also allotted 7,500 tonnes of rice and are talking of importing rice. For distributing rice to the 72 lakh card holders (which because of the drought have been near doubled from 37 lakh card holders) the government needs 5.5 lakh tonnes. By end of March, 1.63 lakh tonnes of rice had been procured in Thanjavur from the Samba and Thaladi crop, and it is expected that the total will reach 3 lakh tonnes. There is here a deficit of 2.5 lakh tonnes for just the ration card holders and this must be covered first by imports from other States. In addition, the government is purchasing 2 lakh tonnes of coarse grains. In this situation, the Food Minister has made a helpful self critical analysis in the Legislative Assembly of the lack of policy in regard to food distribution and called for a long term policy, which he would like to see through scrapping the system of commission agents for procurement, transport and milling and replacing it by a system of producers co-operative societies which will procure the paddy, hull it and transport it to various distribution points. He also proposes building storage bins additionally for 3 lakh tonnes at Rs. 9 crores and so building a buffer stock. This should be acted upon. For 1975-76 the government has announced a total production programme of 109. 44 lakh tonnes, including 80.6 lakh tonnes of food grains, 12.74 lakh tonnes of oil seeds, 43 lakh tonnes of cotton bales and 11.8 lakh tonnes of gur. It is also starting a programme of direct government cultivation through the TamilNaduState Farms Corporation which will cultivate 11lakh acres of arable land now lying waste, starting with 1,520 acres at Gummudipoondi taluk, and also the 14 lakh hectares now classed as fallow. To increase pulse production 1,000 demonstrations with the improved strains are to be conducted and IAAP covering paddy, cholam, cumbu, raggi, cotton and groundnut is being extended to Ramanathapuram, Dharmapuri, Salem and Kanyakumari, thus covering the whole State. In addition 1 lakh acres more are being brought under tapioca as stated in Vol IV pp 494, 547 and 636 in addition to the current 1.09 lakh acres and oil seeds are to be increased by 1.24 lakh tonnes. Thus the stage is set for a resumption of the State's good agricultural and food grain production for the coming year.

## Research Results :

Six new paddy strains have been released as a result of experimental research in the Agricultural Universities and research stations in the South. MR - 301, a 130 days duration paddy is a high yielder with a fine grain quality and is becoming popular with farmers in the South. Similarly Intan impored from Indonesia and MR-81 are semi dwarf 165 days duration, resistant to blast and are particularly suited to low land cultivation and parboiling. Another variety MR - 272 which is a cross between Jaya and S-137 can be grown as a summer crop (90 days) in this State. AICRIP, Hyderabad has released GMR-2 as a Kharif variety for the low lands, midlands and coastal areas, a high yielder, resistant to the gall midge pest, with a duration of 140-145 days. The importance of crop management and land and water use is also brought out in the farming practices in the State alongside of use of HYVS. In Thanjavur where raising of 2 crops is common, and 3 crops spreading, such management practices have erabled farmers in a relatively less water endowed area to raise 2 paddy crops plus groundnuts and maize through careful use of underground water and use of short duration, photo insensitive varieties. In that area an investment of Rs. 4,000 yields a return of Rs. 8,000. Studies have also

indicated ways in which the current 7 percent loss in the rice grain due to wrong timing of the harvest, faulty methods of drying and defective milling can a averted. The techniques for avoiding this loss are known—harvesting a week ahead,staggered sun drying, with preference to mechanical drying and the use of rubber roller shellers at the milling stage. These should now be popularised. In horti-cultural research the Tamil Nadu Agricultural University has developed brinjal varieties, the high yielding SM 50-A (20-30 tonnes per hectare) and SM-2 (20-24 tonnes per hectare) which are resistant to nematodes. The Institute in Hessaraghata has developed a new brinjal variety—Arkanavneet—which can be grown all the year round in theSouth and which is a heavy yielder (700 quintals per hectare). The Kothari sugar laboratories have demonstrated that, at a fairly low cost of Rs. 30,000, each sugar factory should set up its own research unit in order to determine how its local cane crop responds to irrigation and fertilisers and when these should be applied, in order to ensure sugar recovery of atleast 10 percent. Finally a system of grafts and layers have been experimented with in order to increase the yield and improve the quality of jack fruit. The new grafts are now very popular and need to be backed by nurseries in the State.

## HYV in the State and some lessons:

The November 1974 issue of the Agricultural Situation in India presents a study of the use of HYV in this State and some lessons that it suggests. The use of HYV in four districts, Chingleput, Coimbatore, Madurai and Tirunelveli during kharif 1970-71 were studied on the basis of 284 HYV crop cuttings and 252 indigenous varieties cuttings. The main conclusions are: (a) In all four districts IR-8 was the most popular variety, with the highest yield in Coimbatore (35.3 quintals per hectare) and lowest at 26.1 quintals per hectare in Chingleput, followed by IR-5, CO-25, ADT-27, and CO-29. The differences in average yield between HYV and indigenous varieties was high. (b) In all 4 districts, all HYV fields received nitrogen and 81-91 percent received phosphatic fertilisers. But except for P and K in Thirunelveli, there was an average gap of 30 percent between recommended dosage and actual application. (c) The new technology is size neutral, there being no specific correlation between average yield on fertiliser use with the size of the holding, which were classified into very small (less than 1 hectare), small (1-2 hectares), medium (2-4 hectares), large (4-8 hectares) and very large (above 8 hectares). (d) In Chingleput and Coimbatore some farmers growing HYV obtained yields equal to or less than that obtained by local varieties. There is need therefore to educate the farmers using HYV in the package of practices. (e) In all districts, increasing levels of nitrogen led to higher yields and increasing applications of phosphorous and potash. (f) Use of seeds pretreated with chemicals was becoming popular. (g) 55-75 percent of farmers received their seeds from government agencies and most used pre-sowing irrigation, seed bed preparation, line transplanting, lining, thinning and improved implements. (h) About 5-25 percent of HYV farmers suffered crop damage through pests. These lessons should be used to improve our HYV performance.

## Sericulture:

Further to the sericulture programme reported in Vol V pp 20 and 90, in April an extension cum demonstration sericulture centre was inaugurated in the Tamil Nadu Agricultural University as part of the Rs. 33.64 crores Fifth Plan

Programme to increase raw silk production from 2,400 tonnes to 4,646 tonnes per annum. A new variety of worms, bivoltine, was released, which it is hoped will bring us nearer the Japanese norm using 0.57 hectares of mulberry and 4.50 oz of silk worms to produce one bale of raw silk, against our use of 3.10 hectares and 42.6 oz for the same amount.

## Fertiliser :

On the fertiliser front, three events in March - April may be noted. First the government announced in the Legislative Assembly that fertiliser demand was falling in the State and the Government has an unused stock of 1.32 lakh tonnes—incidentally being a financial embarrassment to the government. Hence the government is planning to relax the fertiliser control order and promote the use of fertilisers. Second FAI issued a book, 'Fertiliser Demand and Marketing in Tamil Nadu' outlining the fertiliser needs, distribution facilities and future perspectives in this State. The storage of fertilisers by co-operatives and private retailers is satisfactory as 87 percent of the former and 97 percent of the latter use brick building godowns. The study quantifies dealer-level operational costs, the number of dealers, their characteristics, relative volume of wholesale and retail operations and the extent of credit availability in the fertiliser trade. The study can help more effective planning in this area. Third, efforts to economise on fertiliser use continue. Azotobacter, a bacteria that fixes atmospheric nitrogen in cereals and non-cereal crops, is coming into wider use and an important research programme is under way on an adequate and cheap source of organic material to meet the energy needs of this nitrogen fixing bacteria – which when successful will be an important fertiliser susbtitute.

## Animal Husbandry and Poultry Farming :

The drought is leading to anexodus of cattle at the rate of 5,000 per day from out of the State to neighbouring States, largely for slaughter. The government is taking measures to provide the water and grazing facilities in certain locations to meet this problem. The Eachenkottai cattle farm with 150 Jersey cattle and the Orathanad frozen semen bank are being developed to meet the dairy and cattle needs of the State. The Ambattur dairy is ready for commissioning, and it will start with 1 lakh litres of milk and by next year move upto 2 lakh litres, meeting the needs of Madras City. In April, the Dairy Development Corporation started the supply of milk in polythene bags. On the 1.25 lakh litres of the Madhavaram dairy, 10,000 litres are being supplied in this hygienic and adulteration free bags. The Corporation also inaugurated at the end of March its Rs. 10 lakh cattle food plant which has a production capacity of 40 tonnes a day and which will provide cattle feed for the dairy men at low cost. The poultry farms run in urban areas face a serious problem of poultry feed and many of them started by the educated unemloyed are in danger of being closed down. There is need for a production unit to produce and supply poultry feed at reasonable prices.

## Tea :

As forecast in the last issue(p 216), the tea output for 1974 was 490 million kg. exceeding the target of 478 million kg. and 1973's total by 18 million kg.The entire increase was due to increased production in the North from 358 million kg to 378 million kg. in the first 11 months of 1974. South India tea output declined by 1.7 million kg. at 100

million kg. So too Sri Lanka's output declined as did Kenya's. India's exports increased from 144.3 million kg in 1973 to 155.4 million kg in the first 10 months of 1974. The long awaited meeting of the producers was held in Rome in April, but failed to reach agreement on a minimum export price scheme. There were 2 good papers on the subject by FAO and UNCTAD secretariats: a single minimum price for all countries is ruled out because of the different cost structures and prices in each country: a hierarchy of minimum prices varying with the quality of tea is also ruled out because there is no agreed definition of quality; and so the only alternative is a set of floor prices for each country along with some agreement on marketing, promotion, strengthening of domestic auction and market intelligence as agreed at last year's FAO meeting (See Vol IV p 496). But under the euphoria of the current rise in tea prices and the opposition to any agreement from the African countries working under the umbrella of a multi national British packaging firm, no agreement was reached. The present price rise will pass and the countries will have to try again to agree on a minimum price structure. The question of an International Tea Promotion Council that emanated from the London symposium (See Vol V pp 90-91) was also considered at the same meeting, but not resolved. India should now go ahead with a double campaign to promote tea consumption through a generic campaign in countries like Canada, Australia, and East Europe where tea drinking is just starting, and specific national programmes in countries like UK, US, USSR and the Arab countries where tea consumption is high. This should be the function of the Tea Trading Corporation. The tea industry is agitated over in this year budget of the increased excises in zones 1,2,4 and 5 by 10 to 15 paise per kg. Nilgiris is zone 4 and is hit by the levy which is not related to the cost structure of the zone. Taxes and levies account for 51 percent of rise in costs and it is to be hoped that the accompanying export rebate will lead to an increase in exports. Increasing exports through improved quality is one of the major aims of the small but effective research programme in the Annamalais run by UPASI, which also countributes to pest eradication, high yielding bushes, better farm management and factory equipment. This effort should be further expanded.

## Coffee and Rubber :

Coffee production in 1974-75 turned out to be better than was forecast in the last issue (p 217) at 95,000 tonnes instead of 90,000 tonnes. A record 55,706 tonnes were exported earning Rs. 58.44 crores compared to 1973-74's 52,688 tonnes earning Rs. 46.01 crores. Coffee prices were falling to below 50 cents per 1b in April 1975 compared to 70.30 cents per 1b in April 1973, and with the excess of world supply over demand, the need for agreement on production and prices among producing countries becomes urgent. Rubber production in 1974-75 was 1,31,000 tonnes and the rubber using industry needs 13,000 tonnes more and at the lower international prices. Indian prices are Rs.826 a quintal and international prices are around Rs. 500 per quintal. The government is arranging to supply export goods manufactures indigenous rubber at international prices and is increasing and graduating the subsidy for replanting programmes with a view to increasing production.

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# III Industrial Development

## Salem Steel :

As noted in the last issue (p 217), the 1975-76 plan allocation for the Salem Steel Plant is Rs. 3 crores. Parallelly the Union Steel Ministry is considering expanding Durgapur's alloy steel plant from its current 60,000 tonnes of finished steel to one lakh tonnes. This would cost Rs. 30 crores against Salem's Rs. 500 crores. One pre condition for the Durgapur expansion was that it should produce 90 percent of its capacity of steel ingots, and for last year it attained 80 percent capacity production as noted earlier. This is on old controversy (See Vol III pp 32 and 112) of Salem vrs Durgapur. With the resource constraint, the Durgapur project discussion has been revived. The Rs 3 crores allocation to Salem has resulted in slowing down of the construction work by the Hindustan Steel Works Construction from a Rs. 10 crores programme for the year to Rs. 1 crore. The other 2 Southern steel plants which have together been allocated Rs. 2.15 crores will register no progress at all. Meanwhile their capital costs are escalating from Rs. 850 crores each for a 3.3 million tonnes capacity in 1973 to Rs. 1.300 crores today. There is need for a clear policy on these 3 plants. Salem is the most viable and should be financed on a deficit basis if need be as pointed out in the last issue.

## Neyveli :

The statements on Neyveli expansion made by the various Union authorities are unclear and sometimes conflicting. The Union Minister of Steel in a statement at Madras spoke of the Union government giving top priority to the second mine cut and the necessary resources being provided in 1975-76. Actually there is nothing in the budget for the second mine cut. In another Union government statement, the expansion of the Neyveli Project to 6.5 million tonnes by 1980-81, has been approved at a cost of Rs. 87 crores, of which Rs. 40 crores is for machinery for the first stage expansion to 4.5 million tonnes, and the rest for its further expansion of 6.5 million tonnes. That statement also refers to the price escalation, which may result in the rising to Rs. 98 crores, of which Rs. 45.72 crores will be the foreign exchange cost. On the other hand, the Finance Ministry states that Rs. 12 crores rather than the earlier statement of Rs. 16 crores (see Vol V p 218) has been provided in 1975-76 budget for start of the equipment purchase programme. The rest of the needed funds it is presumed will be in future year's budgets. With the severe power crisis in the State and comparative cost advantage of Neyveli vis-a-vis Singareni coal (Rs. 46.17 vrs Rs. 53.50 per tonne), this kind of unclear planning and execution of this vital sector is unjustified. It is one scheme which must be fully and honestly budgetted.

## Kalpakkam :

The March announcement of the Power Projects Engineering Division of BARC is that the first235 MW unit at Kalpakkam will become critical in mid 1977 and the second 235 MW unit in mid 1979. It is in the Sixth Plan that this power source will become available to the State. Also at Kalpakkam's Reactor Research Centre, research on the design, construction and operation of plutonium

fuelled, sodium cooled fast reactor to provide fuel for future fast reactors. The Kalpakkam 236 MW steam turbine has been entirely manufactured by BHEL, with only 36 percent of the components imported. The second turbine will have less imported components. Here is a case of the trade off between Indianisation and speedy production of power.

## BHEL :

BHEL has produced 13 hydro electric generating plants which are working satisfactorily; the thermal power stations such as Ennore and Kothagudam face generator breakdowns very largely because the coal used is non-uniform in grade, abrasive in nature, and with a high ash content. In nuclear plants, the problems identified are corrosion and radiation and work is under way to produce resistance materials and those adapted to our coal along with optimising cost, performance and operation reliability in fabricaion techniques.

## ICF :

The Integral Coach Factory reports a turnover of Rs. 30 crores, with falling cost of manufacture per coach. In April it shipped 30 coaches at a cost of Rs. 2.25 crores to the phillippines, and 95 coaches for Taiwan and 2 for Burma are being readied. It is producing 48 berth two tier coaches (air conditioned) for dust free long distance travel in the Country. Similar coach production is being planned for the metro gauge from 1976.

## State Industrial record :

1974 was a good year for the State's industries despitethe power shortage. The index of industrial production which was 187 in 1972 and 179.9 in 1973 (when the power cut was 75 percent) jumped to 195.4 in 1974. The number of registered factories increased to 6,985 employing 4.99 lakh workers. The number of medium industries registered with DGTD increased to 37 and letters of intent and industrial licenses issued were 166. The major breakthrough in the State's industrial production was in the manufacture of vegetable oils, wherein 9 lettes of intent for manufacture of cotton seed oil were issued. The State government is planning to set up an Electronic Industries Corporation to raise finance and develop the electric and electronic Industries SIPCOT's complexes at Ranipet and Hosur are developing well and plans are underway to develop similar complexes in Manamadurai, Madurai, Pudukottai and Ramanathapuram. TANSI also had a good year and is setting up new units for producing leather garments. cycle tyres and tubes and machine tools,

## TIDCO :

TIDCO announced in March and April, 7 joint sector projects. A Rs. 11 crores grey iron castings with Amalgamations Limited is to be set up in Arkonam with a capacity of 20,000 tonnes per annum. A collaboration agreement with a Yugoslav firm has been signed for the. project. A Rs. 80 lakh project to manufacture micrometers, dial gauges and other engineering instruments with Swedish collaboration is to be set up at Adyar. A. Rs. 200 lakh plant to manufacture capacitors and other electronic equipment is to be set up at Hosur, with collaboration of a consortium of firms from UK, US and Switzerland. Southern Borax is setting up a plant to manufacture 15,000 tonnes of borax and 3,000 tonnes of boric acid per annum from July. A Rs. 10 crores plant is being set up in Hosur for fabrication of ball bearings reguired by machine tools, cars, scooters, etc, in collaboration

with a Japanese firm. TIDCO has also received a letter of intent to estiblish a dyes and naphthol project to produce 700 tonnes of dyes and naphthol. In addition it is setting up in Madurai a Rs. 2.5 crores 30,000 scooters project. In this expanding programme, two issues need special attention. First the power requirements of these units need to be carefully assessed and provided through a planned generation programme including captive plants,. Second there is too much reliance on foreign technology which in some cases should be replaced by indigenous knowhow, even if it involves some delay in going on stream.

## Small Industries and SIDCO :

The State government is using Tata consultant services to make a survey of the State's raw materials for its industrial development. A parallel study of the power needed by small Industries and assurance of its availability should be planned. Small Industries are not playing their part in manufacturing ancillaries. Only 6 percent of the country's registered 3 lakh and the State's 40,000 small scale units, are producing ancillaries. There is need therefore for large and medium industries to provide small units with guidance regarding design, specification and qualitative standards, as well as to make available to them modern production techniques and facilities for inspection and testing so that small units can produce the quality ancillary components needed by the large units. SIDCO International has been established to encourage small industry exports with a foreign exchange license for Rs. 35 lakhs. Granite, matches and hosiery are in expanding demand in foreign countries, and further exploration of the markets in South East and West Asia is to be undertaken by SIDCO International. This export area should be developed further by the small sector. This State surpassed its export target of Rs 150 crores in 1973-74 but there is need for the State authorities and industries to be involved both in exports planning and promotion. The State small units are presently producing Rs. 4 crores of textiles machinery for Bangla Desh. For this transport and shipping arrangements also need to be improved and firmed up. SIDCO announced in April that 200 work sheds will be constructed in industrial estates at a cost of Rs. 2 crores in 1975-76. 100 sheds will be put up at Ambattur, 90 hosiery units at Tirupur and small estates at Kurichi, Ponnamaravathi, Pumpuhar, Tiruvarur and Namakkal in addition to the 158 sheds already constructed on SIDCO lands and 120 sheds on private lands. The current crisis as at the end of April for the small units is the complete stoppage of power as a result of which 10 lakh workers have been laid off, 40,000 units closed down, with their managements just doing paper work and large scale cancellation of orders for ancillaries from larger units both within and outside the State. Even large units which have their own diesel sets have been held up through non-supply from closed down ancillaries. There is a real danger that the small pharmaceutical, consumer, and engineering units will not be able to recoup their orders and develop as ancillaries, the fears in this regard expressed earlier being reinforced. There is need as stated earlier for power generation and distribution in the State to keep pace with any plans for industrial development. In brick making, the small units face a problem of pricing and coal supply and cost. The controlled price of bricks is Rs. 74 per 1,000 pieces, while the open market price is between Rs. 110-120. Only government construction has been able to obtain bricks at the controlled price and even they now face no offers

because controlled coal prices have gone by 25 percent and will go up further as noted earlier, and rail freight has doubled and wagons are short by 33 1/3 percent. Also because bricks are sold only in the open market where receipts, if given, record the controlled price, the State loses Rs. 20 lakhs in sales taxes. This discriminatory price structure needs revision, along with some regulation of coal supply to the industry. Also the 300 sago manufacturing units in Salem district employing 30,000 workers closed down in March because of lack of water.

**Sugar :**

The State's sugar production upto 1973-74 was very good, despite a decline in the land under cane cultivation. For the Fourth Plan, the production has been 2.88 lakh tonnes in 1969-70, 3.31 lakh tonnes in 1972-73 and 4.43 lakh tonnes in 1973-74, registering a 54 percent increase in the Plan period. There are 2 uncertainties in this bright picture. First the area under cane cultivation is declining from 1.72 lakh hectares in 1968-69 to 1.13 lakh hectares in 1972-73. There is need for increasing cane prices to stop this decline. Second the question of nationalisation of sugar mills is unresolved. The State Government's official position declared in the March / April session of the Legislative Assembly is to take over the mills, starting with those in arrears to cane growers, of which there are four in the State. The State's Fifth Plan also foresees establishing 8 new mills in the State sector, with a crushing capacity of 1,250 tonnes per day.

**Cement :**

Cement production in the State which in November 1974 was 2.68 lakh tonnes (90 percent capacity), declined to 1.5 lakh tonnes in December when the 40 percent power cut was imposed, and fell to 35 percent of capacity (90,000 tonnes) in January when the power cut went up to 60 percent. This was below the State's monthly requirement and there is almost complete stoppage now with the 75 percent cut. The Karnataka and Kerala power supply to these plants are only marginally helpful. This situation is a tragedy as all other inputs including coal are available. TIDCO's Alangulam cement plant also recorded a steep fall in production and before it sets up the new 5 lakh tonnes Rs. 25 crore Ariyalur plant, the power supply situation should be assured.

**Handloom :**

The handloom sector is once more in crisis. By mid March, its accumulated stocks amounted to Rs. 17 crores in this State and Rs. 45 crores in the 4 Southern States due to stock demand at deepavalli, when Rs. 8 crores were sold in Tamil Nadu against the expected Rs. 12 crores, the falling demand because of reduced purchasing power and the 20 percent expansion in controlled cloth by the mills. The State government advanced the handloom exhibition by a month, is encouraging the production of polyester mixed handloom sarees, has granted a special loan of Rs. 3 crores to the Co-optex to increase its procurement operations and granted handloom weavers a rebate of Rs. 2 crores. The Union government has also granted Rs. 4 crores to the Southern States for purchase of handloom cloth. In this grave situation, the 4 Southern States presented to the Prime Minister an 8 point memorandum to meet the crisis requesting : (a) interest free loans to the State governments to procure the accumulated stocks which could be disposed of at a 20 percent subsidy to be shared by

the Union and the States, (b) the handloom sector should also be involved in the production of controlled cloth as it has a potential of 5,250 million metres and has been allocated only 3,000 million metres, (c) the Sivaraman Committee recommendation that 62 percent of mill yarn should be in straight yanks should be implemented along with liberal RBI credit, (d) supply of yarn at fixed prices, (e) giving statutory basis to reservation of certain varieties of cloth for the handloom sector, (f) availability of chemicals, dyes and stable fibres through State governments, (g) establishing a separate co-operative financing agency for the sector and (h) handing over the sick textile mills taken over by NTC to the co-operative sector in order to ensure yarn supplies to handloom weavers. Early action on these minimum demands, formulated by the 4 States which cover 35 lakh handlooms involving 200 lakh people should be taken. It will also be recalled (see Vol V p 194) that the State Budget has provided for a new social security scheme for the handloom weavers to meet their future needs.

## Leather:

In the first 10 months of 1974-75 finished leather exports from the State were Rs. 17 crores against the Rs. 22.5 crores target and semi finished leather Rs. 75 crores. As part of the policy of exporting leather goods, TIDCO, Kamsons and a Roumanian firm are setting up a Rs. 1.55 crore plant to manufacture glove leather, upper leather and lining leather at the rate of 15,000 sq feet, earning Rs. 4 crores of foreign exchange per year. The problems faced by the industry are many. The transition from exporting raw hides and skins to finished leather and leather goods requires an infrastructure which is only slowly developing. Two chairmen of the Leather Export Promotion Councils have revived the proposal for setting up a Leather Industry Development Board, (see Vol IV p 375 and Vol III pp 189 and 261) with the one percent service charge collected by STC to set up service centres to enable small tanners in the State to get their leather finished and change over to semifinished leather exports. In the meantime the government decision not to cut the quota for semi-finished leather any further for 1975-76 is wise, as its permission to import freely wattle bark and extracts for helping the leather processing and finishing.

## Private Sector Reports:

Ashok Leyland's annual report for the year ending 30 September 1974 records a 40 percent increase in vehicle sales to 7,295 and a 12 percent dividend. Its expansion to produce comets and engines is underway and it plans to export 20 percent of its output. The annual report of EID - Parry for the year ending 31 September shows expanding production at its Nelli Kuppam sugar factory, with a recovery rate of 8.19 percent, along with progress on expansion plans from 2,750 tonnes cane crushed to 4,000 tonnes per day. Its alcohol production mix has been changed with the introduction of prohibition, most of its sales being outside the State. Fertiliser production and distribution and the cotton pilot insurance scheme are reported satisfactory, with improved production of ammonium phospates at the Ennore plant and expansion in ceramics production, marine export and merchandising business. The company is taking steps to change its incorporation status to an Indian Company. The Annual report of Parry's Confectionary for the year ending September 30,1974 shows a loss for the year, due to fall in demand for the product and increase in

cost by 20 to 25 percent, particularly of Vanaspathi and higher taxes. Madras Rubber Factory's report for the year ending 30 September 1974 records a 47 percent sales increase, good functioning of the Goa factory in truck tyre production, and a small rubber research centre which is helping the company's development and growth.

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# IV Education, Science and Health

## Unrest in Educational Institutions :

March and April being the examination season recorded 38 incidents of unrest in educational institutes. 13 arose directly from the examination system as it functions, in Jammu and Kashmir UP, Tamil Nadu, MP, Bihar, West Bengal, Maharashtra, Andhra Pradesh and Bombay's burning down of trains. The most comprehensive demand was that of the post graduate students of Osmania which started with a boycott and a hunger fast and included overhaul of syllabus, orientation courses for teachers. Giving less importance to cramming withdrawl of police and intelligence agencies from the campus, (the U.S. government has just published the information that on University security and police arrangements, $ 500 millions was spent in 1974), student representation on academic bodies, not centralising the examination centre as the women's college which has made malpractices impossible, a committee to review appeals against marks and rotating headships of department. The Vice-chanceller accepted all the demands except the location of the examination centre. Among the innovations reported were the gheraoing of the Minister of Education in MP for fixing the examination dates, the girl students in West Bengal, on being refused the right to copy, walking out of all centres and brickbatting, the sale of question papers in Gujarat State at a graduated scale, and a pigeon being used in Kanpur carrying the answers to the examinees. 10 incidents in UP, Gujarat, Tamil Nadu, New Delhi, Orissa, West Bengal, and MP were the result of inter student rivalries and clashes involving stabbing and death of 3 students. Agitation against vice chancellors and authorities occurred in 5 centres in Maharashtra, Kerala, UP and New Delhi. Apart from the JNU action "to paralyze the university administration without disturbing the academic schedule", a new action was the self appointment of a student as vice chancellor in Gorakhpur University who passed 10 orders including suspending the vice chancellor, Proctor, Librarian and heads of 3 departments and appointment of students in their places. 3 incidents were related to major national political issues and occurred in Ahmeda-

bad, Baroda and Bhubaneswar. One of the hidden elements in these disturbances is the role of the staff who, it is reported, are behind the students in these disturbances. Teachers agitating for higher salaries also made their contribution to the state of unrest, particularly university teachers for UGC scales in Delhi, Bombay Poona, Madras, Madurai and many other cities as well as school teachers in Delhi, Bihar and House Surgeons in Madras engaged in strikes and gheraos. One Delhi teacher burnt herself to death. Time is fast running out to deal with the real causes of these real symptoms.

## Educational Reform:

In the 10 year school which is now becoming common in all States, NCERT is at work building in work experience into the 10 year school curriculum, in the application of Science to agriculture and production processes, as well as technology and industrialisation. The entire course of studies for each class is to be broken into small units, arranged in a sequence allowing for completion and evaluation of each unit. The plan is that 20 percent of students completing class VIII will go into ITIs, one stream of students in the 2 years after school will go in for vocational studies leading to employment, along with transferability of credits for those who wish to pursue higher education. Some 1,000 schools are to be assisted by the Union authorities on the 2 year post secondary vocational courses, covering about 1 lakh of students. It is to be regretted that each State is not able to find the resources to make this transformation, as it must be related to a local reality and not based on a macro all India plan. In this State 2.28 lakh students appeared in March/April for the SSLC examinations in 1,254 centres, of whom 1.92 lakh candidates were from the schools and the rest private candidates. This programme may be influenced by the system of internal assessment now operating in 269 high schools for 50,000 students and 5,200 teachers in the ninth and tenth standards. The assessment covers personality, games, hand writing, reading-library work, art and craft work, and is regarded as successful by the headmasters and teachers, so that it is being extended to 200 more high schools this year. A further reform is to make physical education compulsory and integrate physical and general education in a common syllabus with the help of the YMCA college of education in 100 selected schools in the State. Kerala reports falling enrolments in its schools which is traced to its declining population growth. The census showed the decline of the 0-14 age group from 42.63 percent in 1961 to 40.26 percent, and with the increase in the female age of marriage and success of family planning, primary schools in a few areas are registering lowered enrolment. At the University level, there is a world wide ferment. In the UK, a March survey resulted in a study: Is it worth going to university?, and concludes with the thought that both schools and students ask these question which have resulted in decline in university enrolments. A similar debate in France as to the rightness of the 1968 university reforms concludes that reform is a continuing process which must take place daily. In this country, the UGC is pushing ahead with the proposal for autonomous colleges and internal assessments, to replace the examination system. In a late April report based on the 4 workshops at Madurai (see Vol IV p 536), Ahmedabad, Chandigarh and Bhubaneswar, it is pointed out that evaluation may have subjective elements and so should provide for a revaluation if a student desires it. UPSC is appealing to universities to strengthen

and establish where needed, guidance bureau and make them effective employment information offices. There are 54 of them and this reform would also link the university teaching with career prospects. In this State, the government announced in March that it would be setting up two new universities at Tiruchirapalli and Coimbatore, with Tiruchirapalli university covering colleges in the district of Tiruchi, Thanjavur, Pudukottai, and South Arcot, and the Coimbatore university covering the colleges in the districts of Coimbatore, Nilgiris, Salem and Dharmapuri. UGC and the Union Government are reluctant to agree to this proposal because of their desire to freeze the number of affiliating universities. The State governments' case is that Madras university has 106 colleges and Madurai 77 colleges,—an unmanageable number. The estimates Committee of the Legislative Assembly has proposed development of the Connemara Library into a model Library and of microfilming the precious manuscripts in it which are being damaged. It also recommends scientific methods of preserving the Saraswathi Mahal Library and the appointment of full time district library officers to function as the local Library Authority secretaries. It is also announced that the first phase of the TV centre in Madras will begin functioning on August 15.

## Technical Education :

Plans for the Tamil Nadu University of Technology are moving ahead with the approval of UGC for a university centred at the College of Engineering, Guindy and including under it the departments of chemical technology, textile technology, leather technology and architecture and town planning at present in the Madras University. It is hoped that the Madras University will quickly agree to this arrangement and the long awaited Technology University launched. In view of the needs for engineering in the Sixth Plan, the government is gradually increasing the admission to the engineering colleges, beginning with the Regional Egnineering College, Tiruchy, which has admitted this year 200 students against last year's 180, the total students enrolled this year being 1,228. Two Polytechnics are to be granted autonomous college status from this year and a panel is at work establishing the forms for the institutions, which will be supervised by the State - Board of Technical Education. The Film and TV Institute, Poona has initiated a 2 year common course for all its students, after which one or more years will be spent in film direction, screen play writing, sound recording and engineering and film editing and acting developing on the performance and aptitude of the student. The committee on medical educations (see Vol V p 26) has made important recommendations to reorganise medical education. It has recommended (a) the setting up of a Health and Medical Education Commission to oversee all aspects of the training and development of doctors, nurses and pharmacists, and revise the medical curriculum to make it respond to the needs of the community, (b) the attachment of 2 or 3 PHCs to each medical college so that there will be involvement of staff and students with the rural health services, along with the requirement that the internship of each student should be served not in the hospital attached to the college but in a district or taluk hospital, (c) reducing the duration of the medical course which is now $4\frac{1}{2}$ years by 6 months to 1 year and (d) creation of the cadre of health assistants who will supervise multi purpose para medical workers and who will be admitted after passing their 2 year pre-university degree for a 2 year health assistants. This is equivalent to the pharmacist's posts recommended by this State's

planning commission (see Vol II No 9 page 33) and would be another version of the Chinese bare foot doctors. This important report is now under study by the States, after which definitive action should be taken.

## Economics of the Newspaper Industry :

The report of the Newspapers Economics Committee (see Vol V p 80) contains an important analysis of our newspaper industry and makes recommendations there on : (a) Analysing the income and expenditure of 63 newspapers, it found that the total income from sales, advertisements and miscellaneous was Rs. 75 crores, with advertisements accounting for 53.3 percent of total income and on the expenditure side, wages and salaries were 28 percent and material costs 42 percent so that profits before taxes averaged 9 percent of total revenues in 1973. For 115 papers, it was 11.4 percent of total revenues and 29.6 percent of capital. The rate of dividends declared was in excess of the normal rate allowed by government when fixing prices. (b) A very few newspapers suffered losses and the causes for these should be studied. (c) The existence of a monopoly element is indicated by the fact that a few large papers fix the price increase in the others follow suit. There is no basis for the price or advertising cost fixation. On each paper, the profit margin is 3.3 paise. It is recommended that government control the price and advertising rates of this essential service and give MRTP authority to investigate the monopoly practices. (d) Diffusing ownership is important to change the capital structure, improve management and reduce costs. (e) The separate holding companies for holding their assets like land, buildings, machinery and plant break up the profits of the company into several units, and so every newspaper should be set up as a separate unit so that its total profits and losses, its assets and liabilities are definable. (f) As the newspapers did not furnish full details of their income and expenditure, as some of them raise deposits from the public, invest in immovable property inexcess of their requirements, there should be a separate detailed enquiry of those against whom there are complaints of irregularity. (g) To assess language newspapers an R and D unit like U.K's PATRA should be set up, financed by a cess on the Industry to develop a technology suited to Indian conditions. Small newspapers should be helped by provisions of the cheap NEPA news print to them. (h) The ratio of news to advertisements should be 60:40, and as a public service the taxes on machinery and spares imported by the industry should be lowered, so that the price can be reduced and the readership increased.

## Science :

The major event in this period was the launching on April 19 of the first Indian satellite, Aryabhata, made by Indian scientists, with some parts provided by the Soviet Union and launched from a Soviet cosmodrome by a Soviet launching verticle. The satellite is functioning well and its signals are received at the Sriharikota tracking station in Andhra Pradesh and the Bears lake in the Soviet Union. The information is being collected and coded and the satellite will be in orbit for 6 months, sending anenormous amount of data which will take over a year to study and which will have many spin off effects for our weather forecasting, minerals survey, industry and agriculture. With the valuable experience gained by our scientists and the many industrial units which fabricated the delicate and fine instruments of Aryabhata at a total cost of Rs. 5 crores, it is planned to construct and send in-

to orbit in 1977 a second satellite with a highly complex research pay load to survey the country's natural resources. By 1980, the scientists will be able to use our own launching vehicle to put satellites into orbit, and use them for promoting more rapidly our development. Another important development is the project for a mini solar power plant that can energise a tube well or a television set in a rural area without electricity that the Indian Institute of Technology, Madras, BHEL and the West German technologists are developing. This is linked to our ATS programme and can increase its spread effect. Using solar collectors whose technology is known, the project will heat water to a temperature for power delivery for turbo generators. Also a solar powered refrigeration unit is being developed for food preservation. On the negative side, the National Committee on Environmental Planning and Co-ordination (NCEPC) reports that we are one of the most waste producing and pollution ridden countries—producing per person 12 times more garbage than US and 5 times more than UK, suspended waste particles of our thermal plants being 2 to 5 times more in our cities than in the West, polluting our rivers to the point where fish face extinction etc. The committee has therefore intervened to save the 1,100 sq KM Chilka lake in Orissa and its 158 species of fishes and thousands of migratory birds, the elephants, bisons and deer of our Mudumalai Sanctuary which was threatened by the plan to build a reservoir at Teppakadu and piloted the Water Pollution Act passed last year. The committee points out that in most cases for a small amount, for instance, 0.4 percent of the investment of industries discharging their wastes in Damodar River, pollution can be controlled. For pulp and paper, distillaries, fertilisers, steel plants and petrol chemicals the costs will be higher. The committee works Rs. 36 lakh budget, but its regulatory functions are part of the development imperative of the Country.

## Health:

The Central Council of Health and Family Planning meeting in April has launched a major drive against leprosy. For this year Rs. 10.5 crores will be spent to open one control centre each in hyper endemic districts, and set up a 15 patients isolation ward in every block in the selected districts. In addition to the Chingleput Institute, 3 more Institutes in the North, Centre and East will be set up to train leprosy workers. A second campaign will be against blindness, by providing eye health care in PHCs and distribution of vitamin A in heavy doses for children below 6. A third programme is the containment of malaria on which the States must also make a special effort. Finally Family Planning programmes are to be intensified increasing the compensation to Rs. 70 for vasectomy, alongside of a recommendation to exempt from tax all funds contributed to the campaign. In this connection the three developments announced by the All India Institute of Medical Sciences should be put to use—the anti pregnancy vaccine, the minute dose of steroid hormone to help the conventionel harmonal contraceptive and the implant of the steroid tube filled with a contraceptive agent for women. In the Country, Bombay city has set a model for all others to follow with its birth rate reduced from 41 to 25 per 1,000 in 10 years, 24 lakhs out of the 99 lakhs couples in reproductive age (24.2 percent) protected, against the Country's 15 percent, and 50.53 stabilisation per thousand against the Country's 26.3. The instrumentality for this achievement is the involvement of Zilla parishads. Panchayat samitis and all local bodies and the concept of the family hospital which also takes on 10 abortions per 1,000 population.

# V EMPLOYMENT

The 31.6 lakh mandays lost in industrial disputes in 1974 analysed in the last issue (see p 234), will have a comparable toll this year, if mandays lost from the power cuts in almost all States are taken into account. On top of this, the results of the sample survey conducted by Union Labour Bureau, Simla on 1,294 working class families records that the gap between their income and expenditure which was Re. 1 in 1960 has increased to Rs. 81 in 1971. With all the limitations of such surveys and statistical incompleteness, it is worrisome that while in 1961 the worker's average income was Rs. 94 and expenditure Rs. 95, in 1971 it was Rs. 212.33 and Rs. 293.29. Consequently indebtedness among the families has been mounting. This is a further corrective to the computations of the Bonus review committee on wage trends (see Vol V p 64). In this State in April, 17,000 SBI employees went on a token strike in April and the house surgeons went on strike for 21 days—both demanding increased emoluments. The Union authorities report in April that unemployment growth slowed in 1974 to a 2.48 percent increase as against 35.22 percent in 1972, 19.19 percent in 1973. As at December 31, 1974, 8.4 millions were on the live registers of the country's 481 employment exchanges, of whom 4.1 millions were the educated unemployed. The proportion of educated unemployed increased from 47.47 in 1973 to 48.94 in 1974. The report ascribes the slowing of unemployment growth to an increase in employment in 1973-74 in the organised sector by 6.4 percent. In 1973 the organised sector employed 18.8 millions (11.9 millions in the public and 6.8 million in the private sector) and in 1974, 19.3 millions were employed (12.5 millions in the public and 6.7 in the private sector). Under this State's drought relief programme, 6 lakhs were employed in mid March. In Maharashtra the Employment Guarantee Scheme outlined in the last issue (see p 224) was vetoed by both houses in March/April, and is going into operation. All those earning more than Rs. 400 a month and more, the professions, the salary of farmers and general trade will pay in taxes Rs. 25 crores per annum, and the general bodget the other Rs. 25 crores. If the project is worked effectively and adds to the productive assets of theState, it will be a break through. This kind of State effort is needed to meet our massive unemployment problem in the Country (19 millions to be added in the Fifth Plan to the 18 millions unemployed according to the Bhargava Committee (see Vol IV p 432), and the closing down of the half a million educated employment scheme, which has led to a number of programmes such as the Pandyan Engineering Corporation planning to employ 700 unemployed graduates in Madurai to closing down. With regard to manpower analysis, in March the Planning Commission's steering group examining the Bhargava and Dantwalla Committee reports has made an analysis of the supply, stock

and projected demand for engineering, agricultural, medical, scientific, teaching and managerial manpower. Among its findings are the need for a clear definition of the managerial category which presently includes directors, proprietors et al and of whom only 16.5 were graduates and secondly the need to remove inter State barriers to the free movement of technical personnal which are affecting plan implementation and aggravating the imbalances of manpower surpluses and shortages. This is a polite reference to the growing "sons of the soil" employment practice.

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# VI Other Items

## Non-formal Education:

March and April saw 4 events in the Non-formal Education area, an area fast gathering momentum. A national workshop on non formal education for school dropouts organised by the Indian Adult Education Association and the Bombay City Social Education Committee from April 19-22 brought together 50 adult educators who formulated plans, curricular outlines and learning methods including use of TV for out of school education for the 6-11, 12-14 and 15-25 age group. A State conference on Non-formal education was held in Madras on April 12-13 organised by the Regional Council of Adult education in co-operation with the State Social Welfare Board, the Madras Adult Education Association and other voluntary agencies. The conference established 30 projects of non formal education for the age groups 6-11 and 12-14, for illiterate Adults and continuing education for workers, youth and women at a total cost of Rs. 90,000 and requested the Tamil Nadu Board of Continuing Education to co-ordinate the programmes, negotiate with the government for funds for the projects and superwise the execution. The State survey of non-formal education conducted by the Board of Continuing Education has received a full account of the programmes of 15 government departments and agencies. It is now obtaining similar information from the colleges, Banks, SSI and voluntary agencies and plans to present a draft report to the Board by mid June. The Board of Continuing Education inaugurated the non formal education programme for the age group 12-14 (see Vol V p 31) on March 30 at the Rosary Matriculation School at which the Minister of Education and the Member Secretary, Central Board of Education spoke.

## Indian Adult Education Association:

The third meeting of the Executive Committee of the Association was held in Delhi on March 25 and the fourth meeting

in Bombay on April 21 when the activities of the Association, the progress report of the member councils, the publications programme, the budget for 1975 and the arrangements for the Annual conference at a Jabalpure from October 25-27 were reviewed and approved.

## Educational Finance Review Committee:

The third meeting of the Educational Finance Review Committee was held on March 27 when the committee travelled out from Madras to Poondy and paid surprise visits to 5 schools to check their attendance and functioning. The Fourth meeting of the committee was held on April 4 when the first interim report of the committee on teacher recruitment for 1975-76 was finalised and forwarded to the government. The fifth meeting of the committee was held on the 19th April where the position of the schools and teacher pupil ratios were analysed and a recommendation made for the future.

## Educational Structure:

The third meeting of the Educational structure review committee was held on March 6 when the views of teachers organisation on the 10+2+3 structure were received. Except one organisation all were in favour of the proposed structure, with differing views of its staging. The third meeting was held on April 7 when the views of past directors of school and collegiate education were received. Here again except for one person, there was general approval of the proposed structure, differing views being expressed on whether the 2 years should be attached to schools or colleges. The fourth meeting of the committee was held on April 16 when the views of the principals of colleges were received, some of whom were in favour of locating the 2 year course in colleges. A fifth meeting of the committee was held on April 30 at which the evidence so far received was analysed and the main issues to be decided by the committee identified.

## Annual Day Celebrations:

SIET College, Madras, celebrated its Annual Hostel Day on March 6, when the 600 women students including some 60 from other Asian and African countries concentrated on the International Women's Year and its application to India. Mct and Muthiah Chettiar Boys and Girls High School with its enrolment of 2,000 boys and 1,000 girls celebrated their annual day on April 10, when the importance of sports education and co-curricular activities in addition to their academic excellence was emphasised. The Hindustan Engineering Training Centre which provides a varying programme from 1-4 years in engineering to some 600 students from all over India and several Asian and African countries celebrated its annual day on April 19 with emphasis on development oriented education.

## UNESCO Club, Coimbatore:

Some 100 young university lecturers and post graduate students inaugurated the UNESCO Club in Coimbatore on April 16. The Club's programme for the year will be to disseminate information about Unesco, operate a non formal education project, and organise visits of its members to Unesco Centres in Paris and New Delhi.

## Nehru Yuvak Kendra:

The State Advisory committee of the Nehru Yuvak Kendra met on April 18 to undertake an evaluation of the 4 Kendras in the State (see Vol II No. 12 pp 36 and 37). It decided to concentrate the activities of the Kendras on employment and

self employment training of the rural youth and to co-ordinate more closely the work of the Kendras with that of the State's Youth Service Corps. (see Vol I No 7 p 14).

**Vishwa Yuvak Kendra:**

A meeting of the Trust Board of the Vishwa Yuvak Kendra (see also Vol V p 166) was held in Bombay on April 22 at which the accounts for 1974 were examined and approved, and the programme for 1974 was assessed. The Kendra ran 37 training programmes for the districts, taluks and States in India and also one for ESCAP and is providing advisory services for a State Government. A decision on its objectives will be made at its next meeting on the advice of its programme committee.

**Andhra Mahila Sabha:**

The monthly meetings of the administrative committee of the Nursing Home of the Sabha were held on March 21 and April 19 when the monthly accounts were reviewed, the medical staffing pattern recommended by the Hon. Medical Advisor approved and the functioning of the centre examined. On April 28 a meeting of the Trust Board was held when the accounts for 1973-74 were received and approved, and a decision made to spend Rs. 20,000 in 1975-76 in treating poor patients in the Nursing Home and a similar amount for poor children in the Orthopaedic Centre.

**Work Experience:**

The Technical Teachers Training College, Adyar ran the first national course for teachers from April 2-30 in work experience through courses in electricity, electronics, craft studies and photography in preparation for the 10 + 2 school structure that is coming into existence. The training programme introduced the teachers to the new world of technology. The main problem is to integrate the course in total curriculum and not make it just one more subject in the curriculum, particularly at the lower classes. It was a valuable first training experience for the teachers.

**Council of Social Development:**

The executive committee of the Council met in New Delhi on March 25 and examined and approved innovative research projects. One is an integrated programme of non formal education through child and maternity care, family planning including a No Baby bonus scheme. The other is an inter institutional area development programme under which the Planning Commission will with the Council co-ordinate the work of 3 institutions in Calcutta, Mysore and Ahmedabad in an area development plans.

**Association of Indian Universities:**

The Association of Indian Universities (formerly known as the Inter University Board) celebrated its golden jubilee at a conference at IIT, New Delhi from April 20-22 on the subject: Higher Education and National Development. The 100 Vice-chancellors and 100 senior professors present concentrated on the crisis conditions in Indian Universities and called for reforms in higher education with the hope that there would still be time for this renovation.

**National Council of Teacher Education:**

A meeting of the National Council was held in Shastri Bhavan, New Delhi on March 29, when it was decided to concentrate on Teacher training for the pri-

mary schools as the first priority. The work of the State Councils were reviewed and the urgency of their developing restructuration programmes emphasised.

## New International Economic Order :

The second meeting of the working group on the New International Economic Order met in Paris from March 10-15 and continued preparation of programmes particularly in the Science and Technology and Education fields, in execution of the aims of the New order to be submitted to the special session of the UN General Assembly and in time to the legislative organs of Unesco, ILO, FAO and WHO. As noted earlier the Havana and Lima meetings of the Non-aligned, the Lima meeting of UNIDO and the Delhi meeting of ESCAP have carried further this programming process. The role of the secretariats is to find the common ground between the developed and developing countries in proposing the programme structure of this bold new order that has been launched.

## Inter disciplinary Research Methodology Workshop :

Arrangements were completed for the inter disciplinary research methodology workshop to be held in Mysore from May 4-11 on regional planning and the attack against poverty. 33 professors from the 17 Southern Universities and Nagpur have registered for the workshop along with 2 resource staff from New Delhi and Ahmedabad. The intellectual preparation for the workshop is lagging as measured by the number of working papers prepared. The next issue will contain a first report on the workshop.

## April Development Seminar :

The April Development Seminar paper on the subject, Student Unrest, by Dr. A. Abel, Professor of Political Science, Madras Christian College, together with a summary of discussion which took place at the seminar on Thursday April 24 appears as the first article.

## Second article :

A paper, Non-formal Education in Tamil Nadu, appears as the second article.

## Book Reviews :

A review by Dr. A. Ramaswamy, Professor and Head of Department of Economics Annamalai University of the Institute publication, Poverty and Supply of Wage Goods, by M. Ramamurthy and a review R. Ethiraj, Research Officer, Madras Institute of Development Studies of D. M. Nanjundappa's book, Inter governmental Financial Relation in India, appear in the Book Review section.

## Fifth Cencus of Social Science Research :

The result of the Fifth Annual Census of Social Science Research in Tamil Nadu is the special article in this first Special Number of Vol V Nos. 5 and 6.

Dr. Radhakrishnan, educator, philosopher and the second President of the Republic passed away on April 17 in Madras. He was a guiding light to all of us. The Institute met on the 17th April and paid homage to his revered memory and pledged itself to carry forward his task of nation building and spread of truth and light.

# STUDENT UNREST

By
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## I. Introduction

It sounds rather trite to say that the student world of India is in a profound state of unrest and disquiet. But the triteness of the subject should not blind us to the seriousness of the problems it poses nor the urgency of the tasks it lays upon us. The unrest is so widespread, so rampant and so frequent in occurrence that it has become part of our daily news. It has thrown into serious disarray our institutions of higher education which are supposed to be the guardians of the intellectual and cultural heritage of our society. It affects the careers of thousands of our young men and women who are our pride and future hope and are expected to become the custodians of our national honour, freedom and development. It has even raised doubts about the wisdom and appropriatness of investing our valuable meagre resources in colleges and universities which are forced to remain closed every now and then for long periods of time on account of student agitations and strikes which are often accompanied by violence and destructions. Therefore it is not surprising that many educationists including Vice - Chancellors, Social Scientists, political leaders and administrators have been grappling with this intricate and delicate problem concerning a very vital segment of our society. In fact, so much has already been said and written on this subject that it is almost impossible to say anything new or significant. However, the problem is so persisting and pervasive and so intractable that it has to be studied and discussed again and again even at the risk of lapsing into repetitious platitudes.

Student unrest is not an isolated phenomenon but is closely related to several other serious problems which are political, economic, social and cultural in nature. So no comprehensive and meaningful discussion on this problem is possible unless it includes within its scope all these aspects. In fact, such a multi - dimensional human problem calls for understanding through an inter - disciplinary approach. This paper does not claim to be based on any scientific application of the inter-disciplinary method. However, it proposes to stimulate some discussion on some of these various aspects of the problem.

Before beginning, however, it is first of all necessary to deal with a problem of semantics. The term "student unrest" should be distinguished from the term "student indiscipline" which is often used erroneously as a synonym for the former These two concepts refer to two different situations. "Indiscipline" is a pejorative term used to refer to such student activities and techniques as the destruction of property, bandhs, gheraos, etc. which are

not approved by the government and educational officials. "Unrest", on the other hand, is a descriptive term which denotes the atmosphere and the state of mind existing in most student communities. While indiscipline is a symptom of unrest, it is not synonymous with it.

## II Magnitude and Manifestation of Student Unrest

Student unrest is not a phenomenon peculiar either to India or to the present age. There is hardly any age or country which has escaped student revolt. It was evident in the Middle ages in the Town vs Gown struggles over the questions of university autonomy over students' welfare. G.M. Trevelyan describes in his "English Social History" how the rights of the university "... were defended against all aggression by the hosts of turbulent undergraduates herding in the squalid lodging-houses of Oxford, who, when occasion called, poured fourth to threaten the life of a Bishop's messenger, to hoot the King's officials, or to bludgeon and stab the mob that maintained the Mayor against the Chancellor."

There are several references in the history of modern Europe to the role played by student rebellions and student movements in the wider social and national movements of many European Countries. As Prof. S. M. Lipset points out "students were a key element in the Revolution of 1848 in Germany and Austria, and student activisim stimulated the 'Professors' Parliament, which almost succeeded in toppling several monarchs. In Czarist Russia, students spearheaded various revolutionary activity. In the Eastern European countries, where education was limited to a small proportion of the population, students were often the carriers of modern ideas of liberty, socialism, industrialization and equality of opportunity."

Students have also played a very crucial role in the national liberation struggle and movements of the former colonial countries of Asia and Africa. The Chinese students were instrumental in overthrowing the dynastic rule in 1911 and in spreading republican and radical ideas throughout the society. Since then, they have been a powerful social force behind the modernisation and radical ideologies of China. There is ample evidence of students' active participation in the anti-colonial struggles of the developing countries. Pandit Nehru and President Hatta have openly acknowledged the support they got from student organisations and movements in the struggles they waged for national indipendence.

In recent times, beginning with 1960's, student unrest has been very much in evidence all over the world. The whole of Europe, Latin America, the United States, Asia and Africa—all have in turn been torn by student insurgence. The French Student revolt of May-June, 1968 which gave a rude shock to the Gaullist regime, the Free University Movement led by the students of the London School of Economics in 1966, the activities of the Free Speech Movement on Berkeley Campus in 1964 over those of the Student Non-Violent Co-ordinating committee, Students for the Democratic Society etc. in the United States, and the students' role in the national uprisings in Czechoslovakia, Hungary and other East European Countries in the wake of political liberalisation are some of the expressions of student unrest in the post-war world. A few years ago the students' demonstrations in the streets of Tokyo under the 'Zengakuren' greatly influenced several important political decisions taken by the

Japanese government. Several national governments in the Countries of the Third World like Venezuela, South Korea, Turkey, South Vietnam, Sudan, Indonesia, Bolivia, Ceylon, etc. have had to give in to the fury of students at one time or the other. Thus student unrest and its concomitant student indiscipline or revolt have been gaining ground and momentum in the very recent past all over the world. In the words of Rene Maheu, Director General of UNESCO: "This revolt of the young is sweeping across virtually every part of the World; it has taken on the form of an open dispute not only with universities but with society as a whole. With their need for absolutes, the young are less than ever able to tolerate the injustices and disorder of the world "

India, too, is not an exception and has had more than its share of the student unrest which has manifested itself in a series of strikes, agitations, bandhs, gheraos, etc. often accompanied by much violence and destruction of valuable public and private property. It all started with the political demonstrations which were organised during the freedom movement. At the call of the national leaders students participated on a large scale in the 'Vandemataram' and 'Swadeshi' movements during the first decade of this century. Later in the 1920's they left the schools and colleges by the thousands to participate in the non-co-operation movement launched by Mahatma Gandhi. During the Quit India Movement of 1942, thousands of extremist students all over India courted arrest or went underground to fight for independence.

With the achievement of independence, peace and quiet came to prevail for some time but for a few student uprisings in Andhra and other parts of the Country for lingustic States. This did not, however, continue for long. Soon the lull was broken and once again student unrest began to manifest itself in different States. Especially, since the 1960's students have been very much on the move protesting, taking out processions, demonstrating, going on strikes, conducting bandhs and indulging in several other types of activities of indiscipline against something or other. The following Table as worked out by Lloyd Rudolph and his associates gives an idea of the rates of student indiscipline with a degree of violence during 1958 to 1966.

TABLE No. 1

## RATES OF INDISCIPLINE WITH DEGREES OF VIOLENCE

| Year | All cases of Indiscipline | Degree of violence | | | | Percentage of Violence |
|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | |
| 1958 | 93 | 90 | 2 | 1 | — | 4 |
| 1959 | 120 | 118 | 1 | — | 1 | 2 |
| 1960 | 80 | 78 | 2 | — | — | 3 |
| 1961 | 172 | 169 | 3 | — | — | 2 |
| 1962 | 97 | 96 | — | — | 1 | 1 |
| 1963 | 109 | 89 | 19 | — | 1 | 19 |
| 1964 | 395 | 280 | 81 | 29 | 5 | 29 |
| 1965 | 271 | 119 | 111 | 24 | 17 | 41 |
| 1966 | 607 | 257 | 261 | 60 | 29 | 42 |
| Total | 1944 | 1296 | 480 | 114 | 54 | 33 |

**Notes:**

1. Peaceful Protest
2. Some violence but not enough to occasion the use of the police or lathi charge or tear gas.
3. Lathi charge or tear gas used
4. Police firing

This category includes all ranges of violence, i.e. 2, 3 and 4.

**Source:**

Lloyd Rudolph et al. "Student Politics and National Politics in India", **Economic and Political Weekly**, Vol. VI, July 1977. PP 1655-1668.

According to the same source, the following statistical data shows the number of indicipline cases in each State of India together with the number of indiscipline incidents per college in each State during 1958 to 1966.

TABLE No. 2

## RANK ORDER OF STATES BY STUDENT INDISCIPLINE

| | State | No. of Incidents per State (1958-66) |
|---|---|---|
| 1. | Uttar Pradesh | 270 |
| 2. | W. Bengal | 241 |
| 3. | Bihar | 232 |
| 4. | Orissa | 181 |
| 5. | Andhra Pradesh | 168 |
| 6. | Tamil Nadu | 125 |
| 7. | Kerala | 120 |
| 8. | Madhya Pradesh | 99 |
| 9. | Mysore | 96 |
| 10. | Punjab | 84 |
| 11. | Gujarat | 73 |
| 12. | Rajasthan | 71 |
| 13. | Assam | 61 |
| 14. | Maharashtra | 51 |
| 15. | Delhi | 35 |
| 16. | Jammu & Kashmir | 25 |
| 17. | Others | 12 |
| | Total | 1944 |

| | State | No. of incidents per college |
|---|---|---|
| 1. | Orissa | 3.3 |
| 2. | Bihar | 1.5 |
| 3. | Andhra Pradesh | 1.5 |
| 4. | Kerala (1.39) | 1.4 |
| 5. | Uttar Pradesh (1.35) | 1.4 |
| 6. | Assam (1.3) | 1.3 |
| 7. | W. Bengal (1.25) | 1.3 |
| 8. | Jammu & Kashmir | 1.0 |
| 9. | Delhi | 0.9 |
| 10. | Gujarat (0.73) | 0.8 |
| 11. | Rajasthan (0.67) | 0.7 |
| 12. | Mysore | 0.7 |
| 13. | Punjab | 0.6 |
| 14. | Tamil Nadu | 0.5 |
| 15. | Madhya Pradesh | 0.4 |
| 16. | Maharashtra | 0.2 |
| | All India | 0.9 |

This statistical information reveals that violence is a distinctive feature of student indiscipline in India and it has been on the increase in recent years. This is further corroborated by the frequent news reports relating to burning of buses and tram cars, destruction of libraries and university buildings, street fights, killings, police firings, forcible detention of Vice - Chancellors and other university officials, etc.

It is also evident from the data that there are regional variations in the pattern of student activism in India. There are wide differences in the nature and intensity of student unrest and indiscipline among the Indian States. The States in the Hindi region seem to be more prone to student indiscipline than the other States.

There are other research studies which show that student indiscipline is not a serious problem in most of the prestigious and well - financed technological and professional training institutions where as it is quite serious in liberal arts colleges. Even among liberal arts colleges, the older ones with a high reputation for academic excellence including missionary colleges are comparatively free from student indiscipline.

## III Causes and Issues of Indiscipline

The causes and issues over which students' protest processions, demonstrations, strikes, riots and gheraos have taken place range all the way from parochial campus interests to broad political and social concerns at the National and State levels. They include purely minor or local complaints like unsatisfactory conditions in a college or a hostel as well as non - academic political issues such as the dismissal of ministry in power, or condemnation of the foreign policy of this foreign power or that, or the demand for a steel plant in a particular state.

Statistics collected in recent years in respect of student disturbances in recent years confirm this. For instance, an analysis of 280 student strikes and demonstrations which took place in 1964 shows that about, 100 of them were provoked by demands relating to mess bills, right to copying in examinations. "tough" question papers, bad hostel facilities and amenities and other miscellaneous grievances. They also include some serious demands concerning corruption in university administration and other academic issues. Another 60 of these 280 cases were aimed against the so called "police excesses" and other government officials. In most of the cases, larger national political and social issues were absent.

According to an analysis made by Dr. M. S. Adiseshiah, during the Christmas term of 1972 (September to December) 642 cases of student strikes and demonstrations were political in nature; 406 occurred just before the terminal examinations; 350 were due to academic causes; 115 were related to students' conflicts with transport authorities and bus workers, and cinema and hotel proprietors; and the others were concerned with employment opportunities, Student Union differences and police action against students. Commenting on the situations, Dr. Adiseshiah says : " In the Christmas term (1972), or any one time, somewhere between 200 to 300 of our university institutions representing around 10 percent of our total (3,297) were daily involved in strikes and destruction of public property, which are predominant, followed by gheraos and killings, stemming from political involvement and the desire to avoid examinations followed by academic, employment, transport and linguistic roblem - occasions. This is worrisome.

Even more worrisome is the serious Union Government's announcement in the Lok Sabha that between June and November 1972 there had occurred 4,316 cases of unrest in our educational institutions...... The government statement also states that more than a third of the disturbances (1,395) were due the relation to academic or campus matters. This agrees with the tabular presentation above, if parochial matters is good bureaucratese for the urge to avoid examinations." (Seminar, No. 166, June 1973, pp 12—15).

**The Bulletin** of the Madras Institute of Development Studies has recorded 100 cases of student unrest which have occurred in different States during July 1974 to January 1975. An analysis of the causes and issues at stake reveals that the Bihar agitatian and other political agitations in Assam and Uttar Pradesh have figured in 40 cases ; rising prices , inflation and consumption in 36 cases ; conflict with transport authority 45 ; demands for resignation of Vice - Chanceller, Principal and other officials 26 ; police 3 ; Student Union Elections and their aftermath 8 ; copying in examinations 3 ; and linguistic problems 3. The fact 29 of the 100 cases occurred in November - December which is the examination period confirms Dr. Adiseshiah's statement that "examination season is agitation season."

A major trend revaled in this studies is that student involvement in political struggles and agitations which suffered a set back immediately after independence seems to have revived in recent times. This is testified by the increasing number of student unrest cases related to non-academic issues. For example, in 1964, 3 percent of the agitations were due to non - academic issues; in 1965, the figure rose to 5 percent, and in 1966 to 17.4 percent. These non - academic agitations were primarily aimed at political issues directly related to broader socio - econo-mist concerns. This type of agitation, though it is triggered by a specific local issue within the college or the university, soon crosses the borders of the campus and aligns itself with outside political and social forces. Thus an agitation for academic reforms, student participation in university and college admission, better physical facilities and amenities, etc. soon develops political overtones in terms of demands for major political and social reforms and ministerial changes as it happened in Gujarat and as it is happening in Bihar and other agitations elsewhere inspired by Mr. J. P. Narayan. The anti-Hindi agitation in Tamil Nadu in 1965 and 1966 and the pro - English medium agitation in 1967 the Telengana agitation in 1971 and the Andhra agitation in 1972 also fall under this category.

Another significent trend visible in the manifestations of student unrest in recent years is that student agitations seem to be recapturing the ideological vision and commitment of pre - independence days. Though students are now and then agitated over social and political concerns, such agitation, by and large, has been sporadic and unco-ordinated lacking the qualities and characteristics of a goal-oriented movement like sustained leadership and continued central guidance and direction. For a long time after independence, students in India failed to combine effectively to fight against social injustice, and poverty and struggle for a new social order. However, beginning with the Naxalite Movement in W. Bengal and Andhra Pradesh, Indian students are being drawn into the political struggles aimed at radical and revolutionary social, economic and educational changes. A peasant revolt in the small village of Naxalbari instigated many students in Bengal to

leave their schools and colleges and go to work among the peasants and the poorer sections of society spreading the message of revolution. The movement soon spread to Andhra Pradesh. Likewise students participated actively in bringing about the downfall of a ministry in Gujarat. The students in Gujarat first launched an agitation against price rise. Later it was escalated into a movement which culminated in the resignation of the ministry and the dissolution of the Legislative Assembly. The agitation in Bihar started the Gujarat way to paralyze the Government in protest against soaring prices, corruption, and unemployment. With the call given by Mr. J. P. Narayan for "Total Revolution" the agitation has taken the form of a new movement for electoral and educational reforms, and for the dismissal of the Bihar Ministry and the dissolution of the State Assembly. Students are lending their powerful support to this movement and working hard to spread the message of "Total Revolution."

This does not, however, mean that student activism has taken the shape of a coherent and sustained movement. It has to go a long way before it can claim to have been inspired and informed by the noble and high ideals and commitment that characterised the Berkeley Campus Revolt of 1964, of the student champions of the American Civil Rights Movement, of the student uprising in the London School of Economics in 1966 and the rebellion of the French Students in 1968. The ideology of the New Left which is such a powerful factor in Latin American Countries is conspicuous by its absence in the Indian Student World.

## IV Roots of Unrest

The causes and issues—cinema fares and bus charges, admission policies in colleges and question papers; tuition fees and mess charges; disciplinary action taken by college authorities against particular students; the conduct of the police in dealing with student demonstrations; steel plants and boundary disputes; etc.—can only trigger student agitations. They cannot explain the fundamental underlying causes for student unrest. The roots of student activism and militancy reach deep into the present educational system and the social milieu of the young students. Therefore, one should go beyond the superficial causes and issues which occasion student demonstrations and disturbances in order to grasp the real forces behind student unrest.

The roots of student unrest have been traced to different social scientists. Psychologists say that student unrest is the product of the emotional and volatile behaviour of the youth over the personal stress placed on them by the modern technological society caught in a process of rapid change. According to sociologists, student unrest is rooted in the alienation of youth in mass university, the collapse of authority structures in educational institutions as well as in other social institutions, frustration caused by the "generation gap" and an entrenched "establishment", etc. Political scientists have tried to explain the phenomenon in terms of "marginal elites", "revolutionary protest movements", "political participation", "campus politics", "political recruitment", "decision-making", "interest aggregation", " interest articulation ", "student power", and "student influence" Economic interpretations have sought to locate the sources of student unrest in the anxiety, fear and frustration engendered in the minds of young students by the contrast between poverty and affluence, unemployment, inflation and severel other economic factors.

The pattern of the manifestions of student unrest as well as the various interpretations given about its root causes make it clear that it is not simply an educational problem nor is it a mere law and order issue. It should be also obvious from this that one has to study not only the inadequacies inherent in the present system of higher education but also the other political, social and economic factors in order to understand the problem in all its complexity and suggest solutions. In other words, the crisis facing the student world is a part of the wider crisis in higher education which in its turn is related to the general crisis in society.

## I. Crisis in Higher Education :-

The system of higher education in India, since Independence, has been subjected to several pressures and changes which have rudely shaken the faith and confidence of young men and women in colleges and universities and in their efficacy and adequacy to help them realise their hopes and aspirations. The astronomical expansion of the education system, for instance, has placed a severe strain and stress on the colleges and universities. In 1947, there were only 2,82,000 students in 2,014 colleges and 20 universities. The number in 1973 rose to about 30,00,000 students in about 3,700 colleges and 100 universities including allied institution of national importance. By the end of the Fifth Five Year Plan, total enrolement in all university courses is expected to reach 4.8 million. The worst sufferers of this phenomenal increase in university enrolment are students themselves as it has not been accompanied by a corresponding increase in the various resourses needed to give them sound and useful education.

This staggering rise in enrolment has only resulted in over-crowded class-rooms, inadequate library and laboratory facilities, poor hostel accommodation, scanty and ill-produced text-books and other reading materials, scarce or non-existent student services, and no personal attention. Such an environment is hardly conducive for study and learning and makes impossible the cultivation of close student-teacher relations. As the Kothari Commission put it, "many a student goes through the entire undergraduate course with exchanging award with his teachers." The tragedy is that the teacher can hardly recognise his students and they in turn do not hope to receive inspiration or meaningful personal guidance in their academic programme. It is but natural that in such a hopeless sitution, the young students turn to the student leaders who are guided by their political mentors.

The rising flood of enrolment has brought along with it large numbers of students who do not have proper motivation and interest in the subject of their study. Very often, the number of admission seekers is far in excess of the number of seats available in certain prestigious subjects. Therefore many students who cannot get into their subjects of first preference are often dumped in the subjects of their second or third choice. Humanities and social sciences are often the dumping grounds of students rejected in other subjects. It is unrealistic to expect such students to be interested in their studies or to have proper academic motivation. This together with the absence of a relevant and challenging curriculm leads the student to drift aimlessly throughout his undergraduate course in the college with ample time on his hands and ready to be sucked into the vertex of off-campus as well as campus-related non-academic activities. This is testified by the fact that more often than not students enrolled in these groups are found in greater numbers in all student demons-

trations and disturbances. Added to this, the present day student population contains *a large* proportion of first generation literates from the rural areas. Their poor knowledge of English which is still the medium of instruction in many colleges creates problems of communications, understandings and adjustment to the campus environment. Unless sufficient care is taken to give them proper orientation to the life in the college, which is seldom done, they are quite likely to become vulnerable to appeals and manipulations of student leaders for agitations and demonstrations.

Bulging class-rooms filled with mute students are nothing but lonely crowds. The anonymous members of such lonely crowds need some one to whom they can confide their fears and anxieties, and hopes and aspirations, and from whom they can receive counsel and guidance to overcome their problems. Only the teacher can fulfil this need of the student. The tremendous respect and veneration enjoyed by the teacher in the ancient " Guru-Sishya " system of India was due in a large measure to the role he played as a friend, philosopher and guide to the student. The same was true until recent times when the college communities were small and the teachers were known for their professional commitment and competence. But this is not the case to-day. The quality of teachers has undergone an adverse change. As the Central Advisory Board of Education put it, "We do not have in adequate numbers the right type of teachers who have their commitment to education, to the pursuit of truth and excellence, to their professions, to their students and to basic human values." Consequently, there is none to rescue the student in this lonely plight. So, as the Kothari Commission pointed out: "Lack and inefficiency of scholarship on the part of his many teachers and their failure to interest themselves in the students' problems " induces the student to look for the needed companionship, counsel and guidance somwhere else. Teachers who are fighting hard to make both ends meet are burdened with heavy work loads and do not find much time to devote to students. Those who find time devote it to some supplementary jobs, mostly writing books and cheap notes or examinerships, which fetch some extra income. Then being out of touch with students, they become indifferent and negative to every demand that students put forward. This negative stance of the teachers breeds a mentality of frustration and helplessness among students. It is precisely on such a psychology that student leaders and politicians try to grind thier own axes.

The frustration of the student is further accentuated by the unimaginative and unchallenging courses and syllabi taught in a dull and uninspiring manner by ill-equipped and indifferent teachers. Somehow a wrong impression has been created among students in the arts degree classes that their subjects do not require deep thinking or sustained hard work. This easily disposes him to join pretests and demonstrations. The examination system with its undue emphasis on cramming is largely responsible for this. It does not test the merit and real intellectual abilities of the student. it does not differentiate between a student who hides a book in his pocket to copy in the examination hall and a student who hides a book in his mind in the form of undigested cramming and reproduces the same in the answer paper. This tempts the student to devote only a few weeks at the end of the year to prepare for the examination and remain idle or be busy with non-aca-

demic matters either on or off the campus. The curriculum has failed to sustain the interest of the student in his subject and involve him in activity and fully in the teaching-learning process. Moreover, the academic curriculum is not job oriented. It is only capable of producing unemployable or misemployable graduates. A Gujarat University survey of its Arts and Commerce graduates revealed recently that a "fresh B.A., B.Com. Student is not directly employable" "He has to be trained before he can be easily entrusted with any important job, which can be done as well by employing a matriculate and giving him the appropriate training." With this the cup of student's frustration is full to the brim.

As an ultimate outcome of all these strains and stresses, and fears and anxieties, the confidence of the students in the whole system of university education has been undermined. The over-crowded colleges and universities together with remote teachers who are not able to live in close contact with students have caused an erosion in the sense of community on comprises. Through lack of commitment to their work and indifference to the needs and interests of the student, and by their poor quality and mediocre scholarship and intellectul achievements, most of the teachers have forfeited their claims to the habitual obedience and reverence of their students. Students in their turn, not able to get the much needed help and guidance from their teachers in their lonely plight, have ceased to render their obedience and loyalty to their teachers and other officials. They are looking eagerly to other sources for help and guidance. Above all, the utter devaluation of university degrees in the job market has led the student to question the moral purpose and authority of the entire university system. In short, the system of university education has lost its authority and relevance and consequently has caused alienation and crisis of confidence among the students. This process of de-authorisation and alienation happening in the university world is accelerated by the impersonal bureaucratic power structures of sprawling university campuses which have come to take the place of small and simple university and campus communities of olden days which were removed for intimate personal relationships between teachers and students based upon mutual affection and concern, and recognition of one another's needs.

The bureaucratisation of university administration has caused a big managerial failure. Neither the administration nor the teachers maintain adequate contact with the students. Their problems tend to be neglected and their grievances are allowed to accumulate. Very often, due to lack of proper information, the administration adopts unnecessarily negative attitudes even to a simple demand or problem posed by the students. But as soon as the students begin to organise a strike or a demonstration, the administrators become panicky and concede the demands. This kind of attitude on the part of the administration has created an impression among the students that unless they resort to a strike or demonstration, these legitimate demands will not be conceded. Therefore, the students do not hesitate to wield the weapon of strike to force the authorities to meet their demand.

## 2. The Social Crisis :

The roots of student unrest are deeply embedded in the contemporary social, economic and political crisis. Therefore in order to understand the true nature of student unrest, it is necessary to consider the economic, social and political crisis facing India at present for it invariably interacts with our impinges on

the crisis in higher education and reinforces it. On the economic front, the crisis is marked by degrading poverty of the vast masses of people amidst the affluence of a few, concentration of wealth and power in the hands of a small minority, mounting unemployment, soaring prices affecting only the poor and middle classes, and widening gap between the rich and the poor. The social crisis is reflected in the new manifestation of cast and casteism, communal riots, labour unrest, and youth frustration. Widespread corruption and erosion of democratic institutions and values highlight the crisis in our political life. Culturally, a value system based on material success through exploitation, ruthless competition, greed and selfishness has created well-entrenched clique who indulge in conspicuous consumption, are insensitive to the lot of the poor and indifferent to the general welfare of the community as a whole. As a result of all this, the country is engulfed in cynicism, disillusionment and apathy.

Students who are part and parcel of the society are bound to be affected by all that is happening in India at present. As a sensitive and idealistic group, young university students are prone to sympathise with the victims of injustice, exploitation and suffering. Naturally they often identify themselves, as the Central Advisory Board of Education put it, "with broad social, political and economic issues and strive to remove certain injustices or create a more egalitarian Society." Further, education, as the committee says, is after all a sub-system of the society. It is therefore, natural that the discontent, apathy and the general disturbances should get reflected from time to time within the education system.

"The youthful idealism and sensitivity of the students are directed simultaneously against the injustices and deficiencies inherent in the society as well as in the education system. They hear and read a lot about democracy and democratic values and implicitly believe in them. But when they look at the university system, which is their immediate environment, they do not see these democratic ideals and institutions in practice. In fact, thay see that the whole system of education, (administration admission policies, academic courses, teaching methods etc.) is essentially power-elite oriented and tends to buttress the present unjust social order. They want to change this. Therefore, they are ready to agitate and demonstrate against the authoritarian and undemocratic power-structures in the institution of higher education and democratise them by introducing student participation in the administration and government of those institutions at all levels. Only then, they believe, that university authorities will be sensitive and responsive to their needs and requirements.

The economic crisis also affects vitally the interests of the students. Prakash Karat, a left-wing student leader, for instance, has stated: "The increasing economic misery has affected us most, and things have gone to such a pass that desperate remedies are required. This is why students resort to agitations and violence." The same feeling is echoed by Arun Jaitley of the Akhil Bharatiya Vidyarthi Parishad who said: "They cannot remain passive spectators of this scourge of poverty and squalor, of which they (students) become victims." Unemployment makes the future uncertain and bleak for many college students. Their frustration becomes more poignant

when they discover that the education they receive and the academic degreds they get from the universities and colleges are not going to help them in getting jobs unless they have some influence in the government or with the powers that be.

The "campus culture" is also equaly disconcerting to the students. It is nothing but a replica of the "elite culture." With its false sense of materialistic values mediated through undue emphasis on grades in examination and competition, it produces individuals imbued with the materialistic ethic of success in life either by hook or crook. Further, the style of life, which again conforms to the elitist standards, based upon proficiency in English language and imitation of international standards of living (mainly Western), is inhospitable to the rural students who, of late, have been swelling the enrolment in colleges and universities.

The foregoing analysis shows that the relationship between the university and the society is one in which the two buttress and reinforce one another. In fact, to many student activists the university system appears as an important accomplice of the 'status quo'. So they think that without bringing about radical changes in the existing socio-economic order they cannot change the university system. That is why there is a perceptible drift in student attitudes away from the campus issues such as text-books, tuition fees, mess rates, etc., towards involvement in domestic, national and international happenings. As a result, they have come to realise that their problems cannot be solved in isolation but they should be tackled as part of the general malaise of economic stagnation and unjust social system. "Student discontent has been mounting on all fronts — educational, social economic. What has brought it to the boiling point is the economic hardship the country is facing to-day", says Arun Jaitley. Anand Kumar, President of Jawaharlal Nehru University Students' Union says the same when he reiterated that the educational system has now been engulfed by the larger socio-economic unrest among the students. Corruption is another factor against which all student leaders want to fight. They are very much agitated over corruption which is so prevalent in educational institutions, government and society at large. They are bitterly critical of favouritism seen in college and university admissions, in awarding, in granting hostel facilities, scholarships, etc. The extent of corruption and favouritism in employment market and government has shaken their faith in the established institutions and the age-old values attached to them are crumbling. Arun Jaitley asks: "How can we reconcile with such a society? Obviously we have no choice but to rally behind the movement against corruption and cleanse this foul atmosphere." Thus it is evident that student unrest is moving beyond campus grievances and crossing its academic frontiers to join hands with forces and movements typified by J. P. Narayan's movement in Bihar and previous to that the students' agitation in Gujarat which brought about the downfall of the ruling ministry and the dissolution of the Gujarat Assembly.

## 3. Politicization of The Student Community:

The politicization of the student community is often mentioned as one of the fundamental causes for student unrest in India. Students are by and large apolitical. Most of them are normally quiet and are passively absorbed in the daily routine of the college life attending classes, playing games, making friends, cramming cheap notes, etc. But there is

bound to be almost in every college or university a small group of non-conformist students who are ideologically orien-ted and interested in playing politics on the campus as well as off the campus. It is this "political elite" in the college which introduces party politics into the colleges and universities. Political parties are always eager to capture these political elites of the student communities. Especially in present political context the opposition parties find it rather difficult to break the long continued monoply of the ruling party through the ballot-box. So in utter despair, they have developed new styles of political protest which include strikes, "hartals", "bandhs", "dharnas", etc. They need a revolutionary mass base for such methods of direct politi-cal action. They see the possibility of converting the student communities in a revolutionary force which they can use against the party in power. It is easy for them to organise and mobilise the students for political action, who, like the military, live as compact communities in hostels with opportunities and facilities for easy and quick communications and organisation. Further, as students, they enjoy certain informally and socially accepted concessions and immunities when it comes to the question of imposing law and order. As colleges and universities are supposed to be autonomous institutions, police and law-enforcing authorities do not normally interfere with their functioning even if students go on rampage.

All these circumstances tempt the political parties to establish their student wings on the campuses. They seem to realise this through campus political elites. It is common knowledge that all political parts have their respective student wings and through them try to influence college elections and capture the student unions. They often spend considerable amount of money to enable their respective candidates to fight the student union elections. For example, in the student elections held in Delhi University recently, two major political parties played a key role by financing the campaigns of the two rival condidates for the presidentship. The whole affair turned out to be a major prestigious political right without any relation to the basic academic issues. Such politicized student union elections are common all over India. They often leave a trail of bitterness and animosities between the rival groups which will be even ready to clash at the least provocation and vitiate the academic atmosphere of the institutions. The political parties exploit the rival student groups not only during student union elections but also for their partisan political agitations, processions and demonstrations. This was clearly evident in the agitation launched by the students of Andhra Pradesh for a steel plant and later for and against the separate Telengana and Andhra movements, in Calcutta and in a number of other places.

## V The Remedies

The foregoing analysis shows that student unrest is deeply rooted in the university system itself and also in the social milieu in which it functions. So the remedies if at all they are to touch the very roots of the unrest, must be sought at the educational as well as the societal level. There is need for a simultaneous attempt to rectify the deficiencies in the education system and its social environment. This cannot be done singly by the educational authorities. It should be realised that State governments, university authorities, political parties, parents, teachers and students—all together are responsible for the objective situation of student unrest.

As such no effective solution is possible unless each agency endeavours to set its own house in order.

As far as the problem of remedying the educational deficiencies is concerned, number of committees and commisions have investigated the situation thoroughly and have repeatedly recommended certain well known remedial measures. All of them have emphasized the need for raising the academic standards and improving the environment in colleges and universities. The remedies suggested by the Central Advisory Board of Education, the latest in the series, include: (a) improvement of standards; (b) establishment of proper relationship between teachers and students; and (c) giving students an adequate opportunity to participate in the system of higher education. The committee has also laid stress on teachers of quality to be recruited, modernisation of the academic curriculum, use of more stimulating methods of teaching and examination reform. These recommendations are not new. They have been there for a longtime. Why have they not been implemented? It is sheer lack of political will that has stood in the way.

In order to remove overcrowding in colleges and universities, many remedies have been suggested. They include, among others, selective admissions, vocationalisation of secondary education, opening of more job-oriented courses, non-insistence on university degrees as required qualification for any employment and government jobs etc. It has also been suggested that all personnel for senior posts in the government should be recruited at the end of the higher secondary stage and then give necessary further education and training. These recommendations also are yet to be implemented.

Student participation in the education system has been suggested as a remedy for student unrest. It is true that in the wake of quantitative expansion of higher education, university and college administration has become bureaucratic and remote from the student. So there is need for some institutional device through which administration will remain close to the students responding to their needs and requirements. Student participation is suggested as a means for realising this objective. Participation means involvement, personal fulfilment and satisfaction, and community. It also means actual sharing in authority and influence, and in the decision-making process. Such participation requires three institutional devices, namely communication channels, joint consultative machinery, and membership for elected student representatives in the various deliberative, legislative, and executive bodies of the college or the university. While there should not be much difficulty in establishing the first two devices, the third one should be considered with care and caution.

The conference of Vice-chancellors held in April 1969 has recommended the setting up of consultative machinery as a device to facilitate the authorities to discuss periodically and regularly with students, their needs and problems, so that remedial action could be taken expeditiously. The participation of student in the management of hostels, students centres, libraries, sports and games etc. But as far as student participation in university and college statutory bodies is concerned caution is necessary as these bodies deal with certain matters pertaining to finance, examinations, etc., which should be kept confidential. But student representatives could be associated as it is being done at Madras Christian College, with the sub-

committees appointed by the statutory bodies so that the student opinion could be heard and considered. Further, by keeping in touch and communication with the Students' Council, polarisation between teachers, students and administration could be avoided as well as an atmosphere of harmony and mutual understanding could be built up.

Remedies suggest for the elimination of partisan politics from the campuses range from the banning of student wings of political parties to the encourgement of party politics on the campuses. This is a highly controversial issue. There is an increasing tendency on the part of politicians and political parties to exploit student power and unrest of the youth for political purposes, In no other country do poltical parties utilise students so openly as in India for negative pursuits like organising bandhs, intimidating opponents, interfering with the election, etc. This is a dangerous trend and needs to be curbed.

At the same time it should be realised that students should be given adequate opportunities to familiarise themselves with party programmes, and to discuss them with party leaders. They should be free to join political parties and participate in the discussions on various national problems. Politicization of the student community in these terms in necessary and ought to be encouraged. There is nothing to be afraid of in this. On the contrary it will help political parties which, hitherto, have been working secretly inside the campuses, to come out into the open and carry on their educative work among the students. But it should be mentioned that student wings of political parties should not interfere with the students' union which alone can act as the spokesman of the entire college community. Further, the loyalty of the students to their political parties should not make them less loyal to their college and lead them to disrupt its work for party purposes.

As far as social, economic, and political causes of student unrest or corncerned, they are likely to persist for a long time to come. For instance, unemployment which is one of the root censes of despair, uncertainty and purposelessness plaguing the mines of many educated young men cannot be solved in a day or two. It requires long term solutions. One can only hope for the rapid growth of economy so that more employment opportunities are created so that unemployment, one of the fundamental causes of student unrest, could not be eliminated.

Student unrest is a deep rooted phenomenon and is likely to continue for a long time to come causing much worry and anxiety. But it need not lead to panic or pessimism. It demands patience, understanding and a positive approach. The negative and anarchic manifestations of student unrest should not blind us to the positive potentialities it carries within it for future progress and a new social order. There is need to recognise student unrest as an integral part of the general crisis in which the country is engulfed and tackle it at that level. Student activists should be recognised as "prophetic minority." Only such a positive and enlightened approach can yield any enduring solution to the problem of student unrest.

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# Summary of Discussion

In the discussion of the paper at the Seminar held in the Seminar room of the Institute on Thursday, the 24th of April 1975, the author introduced the paper with the observation that the subject of 'student unrest' had been discussed to the point of repetition in recent years. The disquiet is widespread and requires some immediate remedial action as well as long - term solutions. However, a distinction is to be drawn between student unrest and student indiscipline which was its manifestation in acts of violence, gheraos, strikes and demonstrations. In describing the magnitude and forms of manifestations of student unrest, it was stated that the phenomenon was not peculiar to India or to our generation. For example in England in the middle ages, town versus gown, was a recurring confrontation, in which the university community was quick to defend its autonomy aud privileges against the civic authorities. The history of modern Europe abounds in instances of the role played by student rebellions in the wider social and national movements. Student participation was a crucial factor in the nationalist liberation movements of Asia and Africa. In recent times, beginning with 1960, there has been a world-wide sequence of student disturbances each sparked off by varied issues. In India, students played an active part in the 'Vandemataram' movement in 1905 and later at the call of Mahatma Gandhi in the Satyagrahas launched during the struggle for independence. The period immediately after independence was comparatively tranquil. The disturbances commencing in the 1960s reveal certain specific characterstics. The demonstrations which assume the forms of strikes, bandhs, gheraos etc are in many cases accompanied by destruction of private and public properties, burning of buses and tramcars, street fights and even killings. Further, to - date the higher technological institutions have been relatively free of such indiscipline, while the liberal arts colleges have been the principal centres. Statistical analysis also shows regional variations in incidents with the States in the Hindi region being more indiscipline prone. The increasing violence has led inevitably to government intervention with police firings, arrests etc. The causes and issues of student indiscipline range from unsatisfactory conditions in colleges and hostels to non - academic political and social concerns at State and national level. The specific provocation may relate to high mess bills, demand to permit copying in examinations, tough question papers, or adminsitrative concerns like corruption in the university and transfer of a Vice-Chancellor or more general, political and social issues like the demand for the resignation of a ministry in a State or the foreign policy of another nation. Frequently a local or a campus issue is turned to advantage by political leadership and escalates into a political issue. The author emphasised that these incidents of student indiscipline are surface manifestations of a deeper stress, the social, economic and educational crisis that is facing the country. The cirsis situation has arisen because of the rapid expansion of population and explosion in knowledge and the consequent pressures on the university system. These have resulted in the erosion of the basic authority of knowledge. which is the cement of the academic community and a breakdown of community and traditional values. The deterioration in the curriculum content

and the techniques of teaching have also contributed to this degeneration. Some of the social evils such as exploitation, injustice, greed, hatred etc. are mirrored in the university system. Further a small group of politically minded articulate minority, which is ideologically inspired, turns every specific issue into a struggle. *Therefore radical* remedial measures to be effective must be worked out at the educational as well as social levels. The problem of restructuring education has been deliberated upon by expert and authoritative bodies. Effective action must recognise the right to education but diversify the system so that over-crowding in colleges is reduced and employment oriented education together with a de-linking of jobs and degrees forms an alternative channel. Another essential change is in the approach to teaching and learning from the present cognitive and systemological pedagogy to one in which the student is not a *passive receptacle but an active partner.* There appears to be no instant remedies for the deep seated socio - economic causes such as unemployment, slow economic growth etc. While tact and well timed firmness on the part of the educational authorities could contain *active manifestations*, the phenomenon of student unrest and indicipline cannot be solved piece meal or by any one agency. Society, parents and the government as well as educationists should make a comprehensive effort towards its resolution.

In the discussion that followed there was appreciation of the comprehensive analysis and the data presented in the paper which is not easily available. The historical retrospect in the paper regarding student unrest lays at rest the widely held opinion that student agitations to-day derived from Gandhiji's call to the academic community to participate in the independence movement. The view was expressed that, though not the direct cause, as *examinations* were occasions for student unrest, their exaggerated importance should be given up. Moreover degrees and employment should be de-linked, although frustration at the prospect of impending unemployment was not strictly an educational problem, being a function of the disparity between our 3.5 percent per annum economic growth rate versus the 15 percent annual increase in the number of graduates. The analysis of incidence shows that student unrest is mainly a university phenomenon. The academic structural reforms consist of *establishment* of autonomous colleges and reversion to the old system of 2+2 years degree *course* and a 2+3 years *honours* course for specialised study. It was pointed out that the sequential structure and methods of transmission in higher education were designed to maintain the status quo. The universal unrest was an impatient rejection of the status quo and its *instrument*, the educational sub system. Yet another factor is the relatively short period—about three years—that can be spent as an activist student and this compulsion in turn led to vehemence in action. It was suggested that research into various aspects of student unrest *would be an advantage in dealing with* the problem. Another problem area requiring study in depth was the high drop-out rate in our educational system. The feeling was voiced that student involvement in expediting social change had come to stay and such activity should be *regarded as a qualification* rather than viewed inimically as disruptive. In this context it was observed that even in autonomous institutions where many of the remedies suggested in the paper were available, there is dissatisfaction and unrest led by a small minority, with some

faculty involvement. The student body felt that the teachers were merely transmitting knowledge in a mechanical fashion and there is very little innovation in teaching technology. A query was raised whether student representation in the administrative set up would contribute to some stability. It would be of benefit, if students themselves had some forum to discuss their problems which led to unrest and there would be less frustration and insecurity, if career counselling started at High school level. A problem peculiar to India is that higher education, being in English, contributed to academic tensions, as it increased the difficulties of students from language medium schools. A disquieting feature is the under current of hostility between the student community and the academic faculty, in contrast to the friendly informal relations prevailing in the U.S.A., even under disturbed conditions. It is also seen that only a few of the disturbances centre round specific academic issues like reform in curricula, better teaching, course contents etc. The students had more time on their hands as the courses were spread over too long a period in the universities. Quality wise faculty improvment was another area requiring attention. The old system of education, chattapillai, which existed in village schools in Tamil Nadu might, perhaps satisfy the urge for leadership among students. The criteria for appointment, of teachers is also an important factor in maintaining academic good health.

The statistical analysis and the wide ranging discussion on unrest in educational institutions pointed to the gravity of the basic issue and that student unrest and indiscipline cannot be solved by academic instruments alone, but is part of the larger process of economic development and change and achievement of social justice.

# Launching Non-Formal Education in Tamil Nadu*

## A Consensus

There is today a growing consensus in our Country and our State on the adoption of a system of non-formal education as a means of meeting our national objective to eradicate poverty. I refer to five important decisions in this regard.

The Country's top policy making body, the Central Advisory Board of Education (comprising the Union Minister of Education, all the Ministers of Education of the States and some educational specialists) meeting last November with the Prime Minister made the decision to introduce non-formal education into all stages of education and give it priority in financing and so meet the national objective of universalising primary education, abolishing illiteracy and making education work oriented. I shall quote the decision: "The executive emphasis on the formal system of education should be given up and a large element of non-formal education should be introduced within the system. Multiple-entry and programmes of part-time education have to be adopted in a big way. At the secondary and university stages, part-time and correspondence education should be developed and all encouragement given for programmes of self-study. All State plans should henceforth include programmes of non-formal education as an integral part of educational provisions, and suitable machinery to be set up in each State to formulate, devise and implement programmes of non-formal education, including functional curricula, integrated and inter-linked with the formal system. The Board welcomes and endorses the strategy proposed by the Minstry of Education for providing programmes of non-formal education to out-of-school youth in the age-group 15-25 and recommends: That adequate financial allocations be made in the State plans for non-formal education for the age-group 15-25 on the basis of well-defined norms set up by the State Government; that the programme should be flexible, diversified and functionally related to the needs and interests of youth and should equip them for participation in developmental activities; that during the current year 1974-75, all efforts be made to begin the programme in (a) one district in each State with Central assistance and (b) at least one additional district with State funds; and that by the end of the Fifth Plan an effort should be made to cover at least six to seven million illiterates in this age-group. Programmes of adult education (continues the CABE decision) are of great significance for the success of the programme of universalisation of elementary education as well as for securing intelligent participation of the people in all programmes of national development. They should, therefore, be developed on a priority basis. In particular, the Board recommends that the Functional Literacy Programme which represents the single largest ongoing effort of intensive non-formal education linked to a developmental activity, should be strengthened and expanded; and that similar functional literacy programmes should be developed in relation to other developmental schemes appropriate to rural and urban situations. The Board further re-

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* Extracts from the Key Note address, delivered by Dr. Malcolm S. Adiseshiah, at the Conference on Non-Formal Education, held at the Rajaji Hall, Madras, on April 12, 1975.

commends that the adult education programmes should form an in-built part of every developmental activity whether in the rural, or urban, public or private sector, and that Central and State Ministries should make appropriate provision in the respective scheme".

Second, the Education Reform Plan launched by Jaya Prakash Narayan at the National Conference in Delhi in November among its nine points, states as its second point the urgent need to transform the present formal system with its single point entry, sequential promotion, full time instruction and teachers, by the introduction of a non-formal element with multiple entry, part-time and correspondence education and self-study programmes and by throwing open all examinations to private candidates ; its fourth point is a 10 year adult education anti-illiteracy programme built around creative self awareness, citizenship, family planning and upgrading vocational skills; and the fifth point is a 6 hour week non-formal education to all 15 to 25 out of school youth.

The third event was the mid November meeting of the All India Federation of Primary School Teachers in Delhi which decided a 5 point programme to launch a campaign for the universalisation of primary education and in its fifth point decided to introduce non-formal education for dropouts as part of the campaign.

A fourth event is our own Tamil Nadu Perspective Plan presented by the Chief Minister to the Assembly on March 20 which provides "out-of-school education to all who leave school before standard IV and to 143 lakhs adult illiterates in the State as the equivalent of five years primary schooling."

The fifth event is the decision of our State Government to survey and appraise all forms of non-formal education in this State, a task currently under way with the co-operation of all the agencies present here as well as the appropriate department of government, under the direction of the Tamil Nadu Board of continuing Education.

I would like to end this sense of National consensus on non formal education with the international consensus it is receiving. All of you know the report of Unesco's International Commission on Education, 'Learning to Be', and the emphasis it has laid on non-formal education as the strategy of the future. It lays down the principle. "An over all open education system helps learners to move within it, both horizontally and vertically, and widens the range of choice available to them", and goes on to the recommendation. "Artificial or out moded barriers between different educational disciplines, courses and levels, and between formal and non-formal education should be abolished. Non formal education should be gradually introduced and made available in the first place to certian categories of the active population." More recently in the United Nations New International Economic Order, the educational strategy and model is defined as : "Replacement of the current educational models with their structured hierarchy of time dependent learning levels, single point entry, isolation from society and the market place, outdated learning content. and irrelevant evaluation techniques, by varying and Indigenous learning systems arising from the economic, social and cultural realities of each Country and the extra national responsiblities which the New International Economic Order imposes on it; and the development of non-formal and formal learning programmes which aim at individual intellectual development, acquisition of employment and self employment skills,

nurturing the capacity to fight against all forms of exploitation and nourishing knowledge of the kind of world which the demands of the New International Economic Order impose". Such is the State, National and International consensus with regard to the urgency, validity and Viability or Non-Formal Education for our condition and for our times.

## Why the Consensus?

I would now like to turn to the question of why is there this national and international consensus on non-formal education. There are negative and positive reasons for it, reasons which are implicit in the languages of decisions that I have quoted. The negative reasons are the lacks, the failure and the breakdown of the formal school system. I shall enumerate these lacks in summary form because they are well known to you. First as the New International Economic Order points out, the formal school system is a foreign borrowed model, which works very effectively and efficiently in the industrialised affluent economics and their cultures, which is not suited to our agriculture-rural economy and our culture, and is on the point of break down. Second it drops out or pushes out the majority of children, youth, and adults from its learning purview. In our State, 52 percent of the 56 lakhs school pupils are out of the school before standard V, 80 percent by standard XI, 97 percent by the B.A., B.Sc and B.Com stage, and 60 percent adult men and women have never been near a school and are illiterates. Third the minority of our people who are thus educated in the formal system come for the most part from the top 20 per cent of our society, making the system class-biased. Fourth what is learned in the schools and colleges is outdated and the examination purpose which dominates the entire system is no test of learning ability skills. Fifth those who are educated are increasingly unemployed because they are unemployable. Today about 3,00,000 S.S.L.C., graduates, and post graduates are unemployed in this State. Sixth schools and colleges are no longer places of study and reflection, they are centres of strikes, gheraos, violence and unacademic agitation. Finally this unhelpful educational system is overly costly. Our education budget for 1975-76 approved by the Assembly last week was for Rs. 148 crores (for all forms of education) plus what we receive from the Union Authorities, what is spent by parents and voluntary bodies. In 1950-51 our budget was Rs. 10 crores. At this rate of increase, by the end of the seventh plan, education will use up the entire annual budget of the State. Hence formal education as we have it today has more than run its course, it is a lost and losing cause.

Non formal education which is to supplement, complement, correct and in some instance replace it, has positive features which will become evident as we examine what it is. It is comprehensive in drawing in every one, man, woman and child, into its learning system, it is feasible adapting itself to every one's skill needs and learning ability, it is open ended allowing persons to move from learning to work, and work or home to learning, it is work based employment oriented, it does not distinguish between poor and rich, between class or community and it makes for a juster, democratic and peaceful society.

## What is non-formal education

To understand these highlights, I now turn to define in as precise a manner as possible what non-formal education is. We can start with the definition that any form of education and training that is organised outside the formal school and university

system with their full time instruction resulting in certificates, diplomas and degree is non-formal education. This definition can be further focused on non-formal educations, scope and content by classifying from the point of use in Tamil Nadu, 4 forms of non-formal education based on the audience or clientele served and the learning methodology and teaching technology used. From the point of view of audience or clients and their learning needs there are four forms of non-formal education needed in our State.

## Non Formal Education for illiterate Adults

The first is the non-formal education in the form of functional literacy which our 2.2 crores illiterate adult men and women aged 15 and above (most rural farmers and agriculturals labourers) need. Some of you will recall the first State Seminar on Adult Education in December 1969, wherein the Design for Functional Literacy for Tamil Nadu and Pondicherry was forged and in which on the basis of the 1961 census we calculated that there were 2.5 crores (adults and children) illiterate Tamilians and 2 lakhs illiterate Pondicherrians. The plan for the functional literacy programme for our 2.2 crore illiterates is the same as set forth in 1969 Design and has been adopted in its integrity and entirety in the State's Perspective Plan. It is based on teachers, students and voluntary agencies teaching illiterate adults a select vocabulary of words used by them in their work as farmers, housewives, agricultural labourers, fishermen, cowherds, etc., I propose that we do not engage ourselves in elaborating another State plan to abolish illiteracy. The plan exists as I have said and it is not more plans but execution that we need. Hence one of working groups should devote itself to working out 8 or 10 non formal education projects for illiterate adults, their location, their methods, the teachers and materials needed, the cost per unit, and the model functional literacy curriculum and who will execute it, the projects which should be executed by the agencies concerned this year. I would suggest that each of these 10 projects should be budgeted at Rs 3,000 for a six months period project.

## Non-formal education for school and college dropouts

A second form of non-formal education is with regard to the majority of school and college age children and youth who have dropped out of school. For the majority of these young persons, the poverty of their parents has forced them to leave school and work in the farm, office, factory or home. For them, the formal school is an 'economic luxury, and its teaching of little use to their daily work schedule. Here it is necessary for those who have dropped out of school—elementary, middle or high,—for a new curriculum to be developed around the work they are doing, as well as around their general personality and civic interests, teachers to be specially oriented to teach this group in about half the time that the formal school demands, and the educational hours to be arranged usually in the evening, after farm or office work. For the college dropouts and those who wish to improve their qualifications through polytechnic, engineering or arts and science college courses, straight evening classes in these institutions should be organised. In this regard, I propose that a second working group devote itself in developing 5 or 6 projects for school dropouts and 2 or 3 projects for post secondary continuing education courses, discuss the problem of developing the functional curriculum for the former, decide on the teachers, building and material needed, agree upon the

location of each project and who will execute it. I would propose that the group work to a budget of Rs. 10,000 per annum for each school dropout project and Rs. 2,000 for each post secondary project.

## Non formal education in the formal school and college

A third form of non-formal education is the diversification, flexibility, work experience and vocationalisation that it introduces in the school system. This takes many forms. The simplest is to organise learning programmes outside and additional to the school and college hours and curriculum. The programmes of comprehensive schools introduced in the State last year, whereby students in the high school classes are being taught motor mechanics, repair and maintenance of machines, farming techniques etc., after school hours is one such. Another such programme is to introduce work experience in the primary and secondary school courses, taking an activity such as cooking, or weaving or farming or fishing and weaving a syllabus around it so that the mind and the manual aptitudes of the pupils are engaged. Pre-school education in the form of balwadies, nursery schools, kindergartens also falls into this group. The various tutorial schools and colleges, carefully planned correspondence classes and evening classes are forms of non formal education which both remedy the weakness of the formal school and make available college education to those who have missed such higher education opportunities. One important non formal education step that is urgently advocated by all the five events that I have referred to in the beginning is to change the single point entry and exit of our schools into multi point entries and exits so that students can enter at Standard 1 and leave at any point to work at home or in the farm and then rejoin at the standard they left off or again pupils can join at any point in the school stream depending on self study and home work that has been accomplished. In this system, there will be no dropping out of students or pushing out of pupils. Similarly examinations should be replaced by guidance and assessments of the total work of the pupil, in order not to classify them as pass or failures, Ist class, 2nd class and 3rd class, but to identify their abilities, aptitudes, talents and encourage their further development. Non-formal education in the school and colleges also involves adjusting the hours of the institution to the climate, the system of work in the locality, and running on a shift system so that as our educational clientele doubles, as it will in the next 25 years, we can offer full learning experiences to double the number or children, youth and adolscents without worrying about more school buildings, libraries, laboratories and equipment, which we cannot afford and do not have. Finally non-formal education is based on the theory of the unity of work and wisdom, and so requires that all who go to full time school and college spend some part of their lives—6 months, 1 year, 2 years—in work on the farm or factory, before obtaining their degrees and diplomas. I would suggest, that a third working group draw up 10 or 12 projects of some non formal educational element that can be introduced into our schools and colleges in order to remedy their weaknesses. On some forms such as the multiple entry system, we must await government action. On others, some of the agencies here can organise programmes and these might be spelt out in detail; what will be done, how, where and by whom. For this, each project may be budgetted at Rs. 3,000.

## Non Formal Education as Continuing Education

Finally there are various and multiple education and training activities addressed to those who have had some form of education such as, workers' education classes, teaching English and other foreign languages to those who wish to learn them, various training programmes from such simple skills as sewing, basket making to more advanced skills such as upgrading technical and engineering knowhow, entrepreneurial and management qualities, improved farming, fishing, and animal husbandry skills and leisure time lectures, organising the poor and discriminated to fight for their rights,—these are other forms of non-formal education to which we should pay further attention and which a fourth group can discuss.

In this connection, I call your attention to the fact that this year is the International Women's Year. It is a year in which we have pledged ourselves to begin the task of righting the wrongs and discriminations that we have heaped upon women. We have 60 percent illiterates as a State, but we have only 49 percent male illiterates but 75 percent female illiterates. Out of the 2.2 crore illiterates, 1.4 crores are women. In our primary schools 100 percent boys aged 6 to 11 are enrolled, but only 79.8 percent girls, in our middle schools 66 percent boys of the age group are enrolled but only 38 percent girls and in the high schools it worsens—44 percent boys of the age group 14-17 and only 22 percent of girls of that age group. The boy dropouts from primary schools are 30 percent but the girl dropouts are 60 percent. Hence I would like each of the 4 working groups—specially those on illiterate adults, on school dropouts and on continuing education to include some 2 or 3 projects each on education of women and girls. Particularly groups 1 and 4 should develop projects for the functional literacy of adult women, and for training women in some crafts such as sewing, basket making, mending of fishing nets, etc.

## The Needed Inputs

For the work of the four groups and the resulting programme on non-formal education, we need the following inputs:

(1) From the voluntary agencies:

(a) Organising and executing the projects,

(b) finding and providing voluntary teachers,

(c) agreeing upon which projects each agency will carry out, and

(d) joining in a State wide co-ordinating body. In this connection, can the Tamil Nadu Board of Continuing Education perform this function: if so, all of the bodies should be presented on some organ of the Board.

(2) From the government:

(a) The department of Education, the department of Social Welfare and the State Social Welfare Board to be actively involved in this programmes which is part of the Fifth Plan,

(b) The staff of selected teacher training schools to develop (i) the select vocabulary for the functional literacy classes in their locality and (ii) the functional curriculum for the dropouts in their neighbouring villages—This calls for action by the department of Education.

(c) The two departments and the State Social Welfare Board each to set apart Rs.30,000 per annum to finance the projects approved at this conference and executed by the voluntary agencies. These funds are not for the agencies' own expenses but only for non formal education projects that they will be executing. The funds that are to be spent this year on formal education are Rs. 148 crores. We are planning for a small Rs. 1 lakh effort in this powerful non-formal education media.

## The Vistas

Thus the conference and its four working groups will have three very practical results. They are first to organise themselves as a State for non-formal education: second to plan and execute some 30 or 40 projects this year : and third to use for this purpose the limited financial resources and the services of some teacher training school staff from the two government departments and the State Social Welfare Board.

Such are the vistas before this State conference on non-formal education. We are one of the few States where the adult education movement is weak, almost non existent, compared to the vigorous programmes in Karnataka and Kerala, in Maharashtra and Gujarat. It is my hope that this conference which brings together so many small but important groups in the State can forge a practical programme of some 30 to 40 small but decisive non-formal education programmes, on which our government, the Departments of education and social welfare and the State Social Welfare Board are willing to give us a helping hand. Money is not our problem, lack of resources is not our bottleneck. In fact given the general problem of misuse of resources that we face, I am glad that we do not have lakhs of rupees as a government grant. What we lack is a unified will to make our State a learning society, and small practical projects that we can operate and not simply talk about and establish paper plans about. I believe that we can now generate that will and engage in a programme to give ourselves – our adult men and women, our mentally starved children—that learning they are entitled to. Let us all turn to this task.

# BOOK REVIEW

(i)

## Poverty and Supply in Wage Goods in Tamil Nadu

By

N. RAMAMOORTHY

*Publishers: Sangam Publishers, Madras-1.*
*For The Madras Institute of Development Studies, Madras-20. pp-115. Rs. 20/-*

The monograph promoted by the Madras Institute of Development Studies has for its major objective the examination of the persistent problem of Poverty in the country and the arrival at the solution of it, through supplies of consumption goods to the groups afflicted by poverty. The book tries to examine (1) the state-wide pattern of consumption and the causes of inequalities in consumption. (2) the changes in standard of living over time. (3) the estimate of the number of poor in Tamil Nadu. (4) the functioning of the production and distribution mechanism in the State. (5) the estimate of the cost of supplying wage goods at subsidised prices to the deserving poor.

The Chapter on Consumption establishes the dichotomy between the pattern of consumption of esential goods and services between the Urban and the Rural areas during the period 1960-1970. It makes use of the NSS data for the purpose.

The Chapter on Poverty makes an estimate of the problem of Rural and Urban poverty. It tries to define the poverty line on the basis of nutritionally adequate diet which in rural Tamil Nadu was estimated to cost Rs. 15.30 per head in 1960-1961. Based on this standard, the book establishes that 46.45% of the rural population and 11.47 million persons were below the poverty line. On the same count it establishes that 6.39 million persons in 1960-61 were below the poverty line in Urban areas. Taking Tamil Nadu as a whole the percentage of the population below the poverty line was 69.90% in 1960-1961 i.e., 23.58 million persons which figure gradually swelled upto 72.90% i.e., 28.7 million people in 1969-70.

The author comes out with his critical analysis and bold solutions in Chapters IV and V. "In looking for a cause of consumptions inequality, it is not necessary to go behind the inadequate purchasing power in the hands of the poor. The lack is mainly due to the rising prices that wipe out a part or whole of any increase in real income. If there should be equality in consumption of at least wage goods or necessities the purchasing power of the poor people should be supplemented. To state this simply, their income will have to be increased and they have to be given more money. The incomes of the poor people can be supplemented directly by passing on some money to them as a dole. But this would intensify the forces making for a price inflation in the State. The alternative would be an indirect method which would supply wage goods or necessaries at subsidized prices." (P.75).

The author harps upon building up of a buffer stock of essential goods and wage goods so that they may flow from the reservoir to meet the dire needs of the poverty stricken population. He also urges

an improvement of the distributive system through a plethora of fair price shops (10,000 shops) all over Tamil Nadu.

The main question that worries any humanist is that the problem of poverty in this country is not merely the failure of the distributive system but the non-availability of the wage goods for distribution. The poverty of this country as anybody understands it aright, is the existence of mass poverty unrelieved by a gleam of light through the governmental policy. Since independence all the Finance Ministers of India had tried to increase the resources of the Central Government. Did any Finance Minister in Independent India direct his attention for the relief of the problem of poverty of the masses? Of what use is there of subsidies on consumption goods while major Central revenues accrue from excise levy on commodities of common cousumption and services? Six major commodities like cloth, paper, cement, steel and rayon contribute the bulk of the excise duties. They make the goods of common consumption dear, the cost of existence for the poor to that extent is made to soar year after year. The Finance Ministers turn to the common man's goods for raising the needed revenues. By this policy, poverty is being continuosly accentuated and perpetuated. This is one factor which is largely responsible for raising the percentage of those living below the poverty line, which has gone up from 40 to 70 during the last six years.

The book is thought provoking. It reduces the analysis of poverty to a question of caloric requirements for normal existence and a minimum monthly expenditure to meet the minimum physical and non-physical needs. To that extent, it has done yeoman service of bringing the problem of poverty from above the clouds to a practical world of solution, which can be thought about by an improvement of the distributive system and by a subsidy to the goods of common consumption. At the same time the activities of Finance Ministers and the State Governments result is coninuous depreciation of the value of money which depresses the life of the poor and make them miserable.

Perhaps this book will promote more realistic thinking on the solution of problem of poverty. But till a mundane solution is thought about and made practical in this country, our poor will live with us happily, believing in the God in the Himalayas, rather than the Mammon in the market place. Poverty will be as acute as ever, but more bearable due to the unshaken fatih of the poor in things not mercenary.

A. RAMASWAMI.

# Inter-Govermental Financial Relations in India

By

Dr. D. M. NANJUNDAPPA

*Sterling Publishers (P) Ltd., New Delhi 1974, Pages 132, Price Rs. 30/-.*

The research study on the "Inter-Governmental Financial relations in India" analyses all financial problems arising between the Centre and the States. Dr. Nanjundappa discusses fiscal needs, equity, resource transfers, criteria to be used for sharing the returns and debt management.

It deals with the problem of resource transfers, principle of equity and dynamism. The States have been classified into highest, higher, middle, and lower revenue groups. The study discusses a long range economic and national approach to resource transfer for attaining welfare. Maximisation under fiscal federalism. It identifies the revenue gap grant approach as the major cause for the financial instability of the States. It is correct to say that the relative needs of the States should be the objective of resource transfer only then can we achieve an efficient and equitable allocation. The resource transfer through devolution of tax revenues, revenue gap grants and the loans is made to work in an integrated manner to bring about a balanced growth of all States. It suggests that a comprehensive integrated index of development should be the criterion for effective distribution of the proceeds of the divisible pool. And the resource transfer to poorer states should increase with the degree of under development. The study analyses different solutions for an equitable flow of resources and offers an idea of population — Development Index Mix.

After analysing the problem of resource transfers, the working of finance Commission is subjected to critical analysis. The study points out that the finance commission does not assess the fiscal potential of a State in a scientific way. It penalises tax efficiency, inhabits resource mobilisation and creates financial instability for States with marginal surplus and thwerts dynamism. It is true that the methods of measuring tax effort and the principles that are used for resource transfer should be modified. The author pleads for a system of incentive - cum - developmental equity grants with a built-in corrective mechanism to make it possible for the States to frame their tax policies and to promote more decentralised decisions. The mistrust between the Centre and the States in regard to expenditure should be removed for a healthier relationship. The author offers a sound suggestion that the corporation tax, income tax, surcharge on income tax should be included in divisible pool taxes to strengthen the financial position of States.

Chapter IV of the book is devoted to the study of the growing disparities in the levels of development, tax effort and the conflicting objectives in national policies. Some of the devices to measure the tax effort have been enumerated and thus effectively discussed. It suggests that the States should improve their financial management through the tax effort and expenditure economy. Here the author could have suggested methods to effect economies in expenditure.

In the last chapter, the author highlights some problems in regard to the Central loans. After tracing the causes for States'

dependence on Centre such as inadequate resources, mounting development and non-developmental expenditure, the author concludes that the Central loans should be used along with the devolution of taxes and grants for achieving a national equilibrium. It is correct to suggest that the stronger states should be given more loans the weaker more grants for their developmental purposes.

There is a profusion of statistical tables which illustrate various aspects of the Centre-States financial relationship. The book is well laid out with 5 chapters and the theme has been methodically developed and a set of recommendations have been included. Dr. Nanjundappa, who is the economic adviser to the Government of Karnataka, explores successfully the sensitive area of fiscal federalism in this book. The book deserves to be read by students, researchers and those interested in or in-charge of fiscal administration.

R. ETHIRAJ

# THE FIFTH CENSUS OF SOCIAL SCIENCE RESEARCH IN TAMIL NADU

This report covers the fifth census (1975) of Social Science Research conducted by the Institute and follows the fourth census reported in the Bulletin Vol. IV, Nos. 5 & 6, May-June 1974 issue.

The questionnaire issued in February, 1975 was addressed to the five Southern Universities, including the Indian Institute of Technology, Madras, as in last year, 19 colleges, 4 Departments of the Government, 3 Research Institutes in the city and 2 Institutes of Rural Higher Education in Tamil Nadu. In addition the Directorate of Collegiate Education circulated the questionnaire to the 107 colleges affiliated to the Madras university and 77 colleges affiliated to the Madurai university. The Director of Medical Education circulated the questionnaire to the 16 medical colleges in the State. A total of 117 reports have been received covering 14 different disciplines in Social Sciences as against 119 items under 12 disciplines in 1974.

Economics is once more well ahead of all other disciplines with 41 items, out of the 117 projects reported. Under Agricultural Economics there are 18 items History 16, Psychology 15, Social work 8, Geography 6, Criminology 3, Politics and Sociology 2 each and Commerce and Education 1 each. Two new additions to the disciplines listed last year are Demography, with 1 report and Town and Country Planning with two items. A significant addition this year is the report on multidisciplinary research. A tabular statement of the five census is given below :

| Sr. No. | Discipline | 1971 | 1972 | 1973 | 1974 | 1975 |
|---|---|---|---|---|---|---|
| 1. | Economics | 85 | 42 | 125 | 51 | 41 |
| 2. | Agricultural Economics & Co-operation | — | — | 49 | 22 | 18 |
| 3. | Economic History | — | — | — | 1 | — |
| 4. | Commerce | — | — | 5 | 2 | 1 |
| 5. | Education | — | 5 | 2 | 2 | 1 |
| 6. | Criminology | — | — | 2 | 2 | 3 |
| 7. | Geography | — | — | 1 | 4 | 6 |
| 8. | History | 8 | 8 | 4 | 9 | 16 |
| 9. | Politics & Public Administration | — | — | 1 | 2 | 2 |
| 10. | Psychology | 31 | 11 | 14 | 12 | 15 |

| Sr. No. | Discipline | 1971 | 1972 | 1973 | 1974 | 1975 |
|---|---|---|---|---|---|---|
| 11. | Social Work | — | 5 | 7 | 6 | 8 |
| 12. | Sociology | 7 | 4 | 2 | 6 | 2 |
| 13. | Anthropology | 3 | — | — | — | — |
| 14. | Home Science | 44 | 36 | — | — | — |
| 15. | Linguistics | — | — | 56 | — | — |
| 16. | Demography | — | — | — | — | 1 |
| 17. | Town and Country Planning | — | — | — | — | 2 |
| 18. | Multidisciplinary | — | — | — | — | 1 |
| 19. | Others | — | 4 | 2 | — | — |
| | TOTAL | 178 | 115 | 270 | 119 | 117 |

Some features of the fifth census are disquieting. The vast majority of projects reported are on micro problems in the various disciplines and are not compensated by studies on a comprehensive and/or integrated basis on socio-economic problems, finance, industrial development or agriculture. Further there is a disturbing lack of research or studies in the 184 colleges affiliated to the Madras university. Only 30 responded to the questionnaire and 19 of them reported no social science research or studies under way. Of the 11 who reported on their research programme, only 6 have not been covered in the previous survey. The aridity of social science learning in the colleges may in part be traced to this lack of research in the colleges. All the medical colleges report nil in regard to social science studies. The problem of community health and rural medicine which remains a problem may in part be due to lack of social science research in medical institutions. There are no reports on Anthropology, and Economic History and reports on Commerce, Political Science, Education and Sociology are meagre. The lack of data on Home Science is due to not reporting, and not because no research is being done in this important area. Fundamental research in most of the disciplines is absent. This is a disquieting feature as such research is basic to the development of the discipline and will be of assistance to university authorities concerned in planning.

On the positive side it is encouraging to note that a beginning has been made in multi-disciplinary research, which will come into more prominence and use. In the wake of the existing trend towards urbanisation, the two studies on town and country planning, are in the right direction. The Agricultural university Coimbatore has a series of studies on a single area :— Pattukottai. In this regard the lead is being taken by one government department-the census, and the schools of social work and the Agricultural university. The universities need to set up inter - disciplinary cells to enter this area of the future.

Of the 115 research projects, 95 are in pursuance of post-graduate or doctorate

degrees, except 2 which have been reported by Sri Meenakshi Government Arts College for Women, Madurai, which are done by the B.A. students. The college of Rural Higher Education, Coimbatore, has given brief summaries of the conclusions and recommendations as in last year arising out of the research work. In a report like this on research work in Social Sciences such additional information will be of value, particularly to scholars who are working on similar projects. St. Joseph's College, Tiruchi, has reported a project sponsored by the U G C for training teachers in research work and 8 teaching personnel are involved on the project :

The analysis of the data and reports on research in various disciplines in government colleges and universities further shows that there is no set pattern or programme for research in the institutions There is the question of method followed. by the institutions in selecting the research themes. This is not a question of free research vs. directed research because all research in the Country and the State is free and is not determined by some central authority. In the situation in Tamil Nadu there seem to be three elements involved : (a) Research themes are chosen by scholars for their M. Litt and Ph. D. degree according to the information available to them and based on the wishes of their guides. Can this somewhat haphazard selection method be improved ; (b) a majority of other research conforms to the priorities and rules of the financing agency. This is alright if the priorities are also those of the institution and this State, as otherwise it will be distorting in effect or a waste : (c) there are very few themes which arise from the local situation. There may be a case for the research agencies to meet once a year under the agency of the CSSR to review the on going programme, note the gaps and make suggestions for a more effective and balanced fundamental and applied research effort.

## ECONOMICS :

### Christian College, Martandam.

1. Economic aspects of canal irrigation agriculture with special reference to Kanyakumari-Survey-sample method.

Commencement — to commence shortly.
Completion —

### St. Joseph's College, Tiruchirapalli.

2. Correlation between prices and production of agricultural commodities in the districts of Tiruchirapalli, Thanjavur and Coimbatore.

To find out whether price changes affect production in some of the major crops in these districts (official and market prices)

Questionnaire method by investigators and stratified random sampling to be used.

Commencement — On release of funds by UGC
Completion — 3 Years.
Project sponsored by UGC

for giving research experience to college teachers.

### Madurai University, Madurai.

3. An analytical study of economic development of Tamil Nadu.

To study the agriculture-industry relationship in a developing region. An econometric model of the dualistic type developed by Ranis-Fei, Jorguran and Dixit; a planning model incorporating cartids and policy constraints; a stochastic type growth model developed by Tintner and others.

Commencement — July '72
Completion — Continuing.
Degree — Ph. D.

Operations research approach to capital budgeting under uncertainty.

To develop solutions for capital budgeting problems under uncertainty, applying tools of operations research to develop solutions for the various categories of capital budgeting problems under uncertainty.

Commencement — January 72
Completion — January 77
Degree — Ph. D.

5. Efforts made towards decentralised production on Gandhian lines in Madurai University area.

To asses the working of Khadi and village industries and study their problems. Descriptive and analytical.

Commencement — October 70
Completion — October 75
Degree — Ph. D.

6. Public expenditure of the Government of Tamil Nadu.

To analyse the expenditure pattern and study the impact by analysis of data and cost-benefit analysis.

Commencement — November 73
Completion — January 76
Degree — M. Litt.

7. Industrial relations in Tamil Nadu.

To study the problems of labour, Trade unions and Industrial relations, the role of the State, employer's and workers' organisations and the machinery to ensure cordial relations in industry-analytical study.

Commencement — October 74
Completion — October 76
Degree — M. Litt.

8. A quantitative economics analysis of allocation resources in Tamil Nadu.

To get the optimum allocation of resources to achieve maximum output full employment etc; fitting L.P. and I.P. models.

Commencement — October 71
Completion — October 76
Degree — Ph. D.

**Madras Christian College, Department of Economics.**

9. An international comparison of Household savings pattern.

To find out differences and similarities in the savings patterns of households in economics at different levels of development.

Secondary data to be supplemented by field studies.

Commencement — January 75
Completion — January 79
Degree — Ph. D.

10. Economic change in SouthIndia—a regionally disaggregated analysis.

Reported in the Bulletin Vol. IV, Nos. 5 & 6, Page : S. 3

11. Entrepreneurship in Tamil Nadu.

Reported in the Bulletin Vol. IV, Nos. 5 & 6, Page : S. 3

12. Productivity and technical change in indian Industries.

Reported in the Bulletin Vol. IV, Nos. 5 & 6, Page : S. 3

13. Transfer of Technology and structure of transformation in Indian Agriculture.

Reported in the Bulletin Vol. IV, Nos. 5 & 6, Pege : S. 3

**Presidency College, Madras.**

14. Economic Development (subject to be decided)

Commencement — 1.4.76
Completion — 1.4.79
Degree — Ph. D.

15. Foreign Trade for economic development in underdeveloped countries—with special reference to India.

Commencement — 1.10.74
Completion — 1.10.78
Degree — Ph. D.

16. Income inequality—A socio-economic interpretation with special reference to Tamil Nadu.

To study the nature of economic development of Tamil Nadu since independence and test the Simon Kusenets hypothesis of income distribution.

Commencement — 1.10.74
Completion — 1.10.78
Degree — Ph. D.

17. Agricultural taxation and economic development in Tamil Nadu.

To study whether the Agricultural sector is undertaxed, per capita agricultural tax burden in contract to non-agricultural taxation.

Time series analysis.

Commencement — Registration in '75
Completion — —
Degree — Ph. D.

18. Banking expansion and income development.

A study in monetary entrepreneurship- a case study of the Syndicate Bank in Karnataka State

Time series study

Commencement — July '74
Completion —
Degree — Ph. D.

19. Economic development.
Commencement — 1.4.75
Completion — 1.4.79
Degree — Ph. D.

20. Development of Banking and Currency.

To explore the terrain and assess the early development of Banking and Currency in India, particularly in Madras presidency.

Commencement — 1.8.74
Completion — 31.7.77
Degree — Ph. D.

**University of Karnataka, Department of Economics.**

21. A study of agro-industrial integration in Coimbatore region.

To study the extent of integration between agriculture and agro-industries on the one hand and agriculture and agro-based industries on the other and identify the crucial factors upon which integration depends.

Descriptive and analytical study. Interview schedules used. Sophisticated statistical method regression used for analysis of data.

Commencement — April '71
Completion — June '75
Degree — Ph. D.

**P.S.G. Arts College, Coimbatore.**

22. The operation and significance of Chit Funds in Tamil Nadu.

To study the causes for the popularity of Chit Funds, adequacy of legal safeguards and to suggest structural changes to overcome existing difficulties.

Questionnaire survey method and multistage sampling adopted. Secondary data also collected. 133 foremen of Chit Funds selected at random out of 657 from 3 different districts and 100 members were asked to answer two different questionnaires.

Commencement — January '73
Completion — 1974

Done under the Tamil Nadu Research Fellowship Scheme.

23. A survey of Engineering Industries in Coimbatore.

To analyse certain technical and structural parameters of the engineering industries, the economic impact of size variation, extent of capacity utilisation and deduce the factors enabling the growth and concentration of these industries in Coimbatore.

A questionnaire survey method. 16 sample units at random selected out of units using both finance and machine shop with respect to the motors, pump sets, machine tools and textile machinery.

Commencement — April '72
Completion — April '74
Financed by UGC

24. Liquidity ratios

To enquire into the impact of liquidity ratios on Bank performances especially in terms of credit planning, cost of lending and profitability ratios, the macro economic implication of the imposition of these ratios and the nature of relationship between branch expansion, deposit mobilisation and advances.

Secondary data from RBI and annual balance sheets and primary data regarding volume and cost of borrowing from RBI and its impact on lending through questionnaire involved.

Commencement — April '73
Completion — 1977
Degree — Ph. D.

25. Sales tax in Tamil Nadu.

To study the growth, types and yield, the effects and burdens of sales taxation, the problems of interstate sales taxation and to evolve and improved policy.

Documentary sources used for data and

questionnaire method for tracing incidence.

Commencement — 1.10.74
Completion — 31.9.78
Degree — Ph. D.

**Institute for Techno Economic Studies, Madras.**

26. Study on the absorption capacity in Tamil Nadu of the repatriates from Ceylon.

To evaluate the actual as against the estimated capacity of the existing schemes in the State to absorb the repatriates as also their effectivity, the impact of the training programmes on the absorbing capacity of the schemes formulated and to identify areas of fruitful absorption and formulate specific schemes in a phased manner for the absorption of repatriates. The scope, approach and content of the research would cover : population and employment technology, rural and urban employment, absorption capacity of potential growth centres, industrial complexes etc.

Commencement — November '74
Completion — July '75.

Sponsored by the Ministry of Supply and Rehabilitation, Government of India and Revenue Department, Government of Tamil Nadu.

27. Cost-benefit evaluation of the percolation pond schemes implemented under the centrally sponsored Drought prone Area programme in Dharmapuri and Ramanathapuram districts of Tamil Nadu.

Reported in the Bulletin, 1974, Vol. IV, Nos. 5 and 6, Page S. 6

**Annamalai University, Annamalai Nagar.**

28. Capital formation in the agricultural sector in Thanjavur district.

Reported in the Bulletin, 1974, Vol. IV Nos. 5 and 6, page 3.

29. Fluctuations in land values in Chidambaram taluk during the last 40 years.

Reported in the Bulletin, 1974, Vol. IV, Nos. 5 and 6, Page S. 4

30. Economics of urbanisation—a case study of Madurai conurbation.

Reported in the Bulletin, 1974, Vol. IV, Nos. 5 and 6, page S. 4

31. Prospects for the export of engineering goods.

To identify the product groups in the engineering industry which have greater export potential, the extent of contribution made by units having foreign colloboration and to examine the infrastructure required for export.

Data collection from secondary sources and primary data from sample units located in Southern region.

Commencement — April '74.
Completion — April '77.
Degree — Ph. D.

**Indian Institute of Technology, Madras.**

32. Wage comparisons for middle managers in private industrial organisations in Madras.

Commencement — --
Completion — September '75
Degree — --

**V. O. Chidambaram College, Tuticorin.**

33. The economics of forest development in Tamil Nadu.

Commencement — January '74
Completion — January '79
Degree — Ph. D.

**Fatima College, Madurai**

34. Industrial production function.

To fit a function and to find out the scope for reducing cost.

Secondary data of an engineering industry used to fit a function mathematically.

Commencement — September '72
Completion — August '74
Sponsored by UGC

35. The impact of industrial colonies on the economies of Madurai.

The study is to cover mainly the progress of industrial colonies during the planning period and the impact they have created on the economies.

Commencement — July '73.
Completion — Continuing.
Degree — Ph. D.

**Madras Institute of Development Studies, Madras.**

36. Educational profile of jobs in Tamil Nadu.

Reported in the Bulletin, 1974, Vol. IV. Nos. 5 and 6, page S. 8

37. Operational efficiency of small and medium plantations.

Reported in the Bulletin, 1974, Vol. IV, Nos. 5 and 6, page S. 8

38. Economics of sugarcane technology in Tamil Nadu.

Study by the Institute in 1975.

39. Unemployment of ITI trainers in Tamil Nadu.

Analysis of completed questionnaires and to recommend a programme of action—study by the Institute in 1975.

40. Rural Housing in Tamil Nadu.

Study by the Institute in 1975.

41. Commercial cultivation of vegetables in Tamil Nadu.

Study by the Institute in 1975.

## AGRICULTURAL ECONOMICS AND CO-OPERATION :

**Tamil Nadu Agricultural University, Coimbatore.**

42. Economics of marketing of flowers in Coimbatore district—Jasmin, Crossandra and chrysanthemum.

To identify the market structure in flower trade, work out economics of flower marketing. and study the problems of flower marketing. Five wholesale and five retailers in flowers were selected by sandom sampling in Coimbatore City and through them 45 growers were contacted.

Commencement — 1973
Completion — 1974

Sponsored by the Department of Agricultural Economics.

43. An economic appraisal of problems of small farmers with reference to new strategies of agricultural development.

To identify small farms that can be developed into viable units, to study the crops pattern and income and expenditure and the major problems in the adoption of improved practices and steps to overcome them.

Commencement — January '73
Completion — March '74

Sponsored by the Department of Agricultural Economics.

44. A study of markets and marketing of major farm products in Pattukottai division of Thanjavore district.

To identify the market structure to estimate the marketable and marketed surplus for paddy and groundnuts, to estimate the price spread, and to study the problems in marketing and find solutions.

Ten villages in Pattukottai and Madukkur blocks of Pattukottai were selected at random in proportion to gross area sown and 9 holdings each from each village selected at random for study. The channel of distribution of farm products were traced and a random sample of market agencies were studied.

Commencement — 1973
Completion — 1974
Degree — M. Sc. (Ag.)

45. A study of factor market for labour in Pattukottai division of Thanjavur district.

To study the demand for and supply of labour, to identify the structure of labour market and to study the problems associated with them.

9 farmers each were selected from 10 villages of Pattukottai and Madukkur blocks selected by probability proportion to gross area sown, for the study.

Commencement — 73
Completion — 74
Degree — M. Sc. (Ag)

46. A study of consumption, savings and distribution of income in farm households in Pattukottai division.

To study the size and pattern of distribution of gross income of farm families, estimate the propensity to save and the relative share of farm and non-farm income to the total family income.

In an integrated agro-economic study of Pattukottai aud Madukkur blocks, 9 farm households were selected from each of 10 villages selected by probability proportion to gross area sown.

Commencement — 73
Completion — 74
Degree — M. Sc. (Ag)

47. A study of pattern of farm finance and investments in Pattukottai division of Thanjavur district.

To analyse the investment pattern, estimate the farm credit requirement, supply and credit gap and identify the problems involved in requiring farm credit.

9 farmers per village from 10 villages selected by probability proportion to gross area sown in Pattukottai and Madukkur blocks were studied.

Commencement — 73

Completion — 74
Degree — M. Sc. (Ag)

48. Determination of optimal plans for resource use and income efficiency in farms of Pattukottai division of Thanjavur district.

To evaluate resource use pattern on farms, determine optimum crop mix and resource use pattern to maximise farm income and identify problems, social and personal, behavioural constraints in practising optimal plans.

9 farmers from each of 10 villages selected by probability proportion to gross area sown from Pattukottai and Madukkur blocks were studied.

Commencement — '73
Completion — '74
Degree — M. Sc (Ag)

49. Impact of land reforms and labour laws on farm structure and agricultural production in Pattukottai division of Thanjavur district.

To review the various land reforms and labour laws to evaluate the impact of these laws on agricultural production and farm structure and identify problems in enforcement and identify so as to ascertain solutions.

Six holdings each from 10 villages were selected by probability proportion to gross area sown for the study.

Commencement — '73
Completion — '74
Degree — M. Sc. (Ag)

**College of Rural Higher Education, Coimbatore.**

50. Factors affecting securing and repayment of agricultural credit from Canara Bank, Sarkar Samakulam, Coimbatore District.

To assess the extent of credit secured by farmers, to study whether they get credit in right time and quantity and identify the factors like educational and socio-economic status, social participation, value-orientation that help or hinder in securing credit and the factors which help or hinder repayment.

Empirical study and field survey method used. Covering a sample of 100 farmers chosen by combination of stratified proportinate and systematic random sampling in 20 revenue villages within an area of 16 Km radius of the Bank. A Bank, schedule and an interview schedule used.

The conclusions are : The Bank provided timely credit on reasonable rates. Loans were collected without overdues. But there was inadequacy of credit, diversion of loans by farmars, failure to cover small and marginal farmers and low proportion of agricultural loans on the total loans.

Suggestons made are : Organisation of farmers' service societies and introduction of crop insurance scheme.

Commencement — 1-4-74
Completion — 3-3-75
Degree — Post graduate diploma in Agricultural Economics and Co-operation.

51. A study of managerial efficiency of Tudiyalur Co-operative Agricultural Services Ltd., Tudiyalur, Coimbatore district, with reference to the personnel management, the decision making process and members' satisfaction.

Survey method and interview techniques adopted. The elected directors and staff of the society interviewed. Purposive and proportionate random sampling adopted for selecting one nearest and one far-

hest village in the area of operation of the society and 10 percent of village membership.

Major conclusions are : Using scoring and quantification methods in the analysis, a good trend in the efficiency of personnel management and managerial efficiency observed. Members' satisfaction of the managerial efficiency was neither good nor bad.

Commencement — 1-4-74
Completion — 3-3-75
Degree — Post graduate diploma in Agricultural Economics Co-operation.

52. An enquiry into the factors that lead to the success or otherwise of the working of the Harvey Mills Employees, Co-operative Stores Ltd., Vikramasingapuram, Tirunelveli district.

To examine how far factors like membership and capital structure, purchase, pricing, sales and management contribute to the success or otherwise of the stores and to suggest measures for further growth.

1,100 members out of a total of 6,300 members were selected by using systematic random sampling procedure in a descending order on the basis of their monthly income for the study.

Conclusions : Membership and share capital had increased and contributed to the growth of the stores. Purchase and sales had materially increased and 80 percent of the respondents made their purchase from the stores. The cost of management had increased considerably. The suggestions made are : The stores should reduce its borrowings, and enhance its own funds and reduce cost of management.

Commencement — 1-4-74
Completion — 3-3-75
Degree — Post graduate diploma in Agricultural Economics and Co-operation.

53. A study of industrial relations in co-operative spinning mill.

To ascertain the nature of industrial relation and find out the factors responsible for cordial strained relationship

Field survey method simple random sampling with the help of random number table of workers and for mills purposive sampling used.

Conclusions : Majority of industrial disputes were solved before it led to strike by collective bargaining. Mandays lost were low and duration was only about 10 days in most cases. Majority of the respondents held high labour morale. 81 percent of the respondents expressed cordial relationship with management. There were adequate machinery for redressal of grievance and a fairly good communication system. Suggestions : Since the majority of strikes was for bonus, demands, the mills should try to declare higher percentage of bonus by increasing its profit earning capacity.

Labour Welfare Offices should be appointed and the grievance procedure should be streamlined.

Commencement — April '74
Completion — March '75
Degree — Post graduate Diploma in Agricultural Economics and Co-operation.

54. The operational efficiency of Palliveeranpatti Co-operative Coffee Curing Society Limited.

To study the operational efficiency of the Society with reference to soundness

of capital, procurement, processing, storing, marketing, management etc and members' satisfaction and loyalty to their society.

Two villages, one nearest and the other farthest, selected on the basis of distance from the society and probability proportion to size of land sampling device used for selecting 80 coffee growers out of the 291 in the area.

Conclusions : A study growth trend in working capital observed, with borrowed funds and as major constituent. Due to crop failures, the overdues were increased.

Commencement — 1-4-74
Completion — 3-3-75
Degree — Post graduate diploma in Agricultural Economics and Co-operation.

55. A study on the pattern of leadership responsible for the success or otherwise of the Tiruchengode Co-operative Marketing Society, Tiruchengode, Salem.

To study the extent to which the socio-economic conditions and the personal characteristics of the leaders that contributed to the success or otherwise of the society.

Field survey method and multi-stage sampling procedures were adopted. Five villages were selected by random sampling and by proportionate random sampling procedures the members were selected.

Commencement — March '74
Completion — March '75
Degree — Post graduate diploma in Agricultural Economics and Co-operation.

56. A study of the deposit mobilisation by the Perambalur Co-operative Agricultural Bank.

The study of the extent and pattern of mobilisation by the bank, the banking habits of members in relation to their socio-economic conditions, problems in trapping deposits and the services rendered by the Bank.

Two interview schedules, one for the Bank and one for the sample respondents used. 50 members depositors and 50 non-members depositors selected.

Conclusions : The deposits from members tended to increase year after year and deposits from non-members decreased. The relationship between the socio-economic characteristics and extent of savings was significant. The relationship between the size of holding and extent of savings was significant but was negatively related.

Commencement — March '74
Completion — March '75
Degree — Post graduate diploma in Agricultural Economics and Co-operation.

57. The operational efficiency of the Coimbatore - Nilgiris Automobile Spare Parts Co-operative Store Limited, Mettupalayam.

To analyse the operational efficiency of the stores in turns of capital stucture, purchase of automobile spare parts, marketing and members' satisfaction in respect of price and services tendered.

The case study method and interview techniques adopted. Multi-stage sampling of private dealers and members of the society.

Commencement — March '74
Completion — March '75
Degree — Post graduate diploma in Agricultural Economics and Co-operation.

58. A case study of working of the Anupparpalayam Metal Workers' Co-operative Cottage Industrial Society Limited. Anupparpalayam, Coimbatore.

To supply the membership pattern, capital structure, features of production and marketing, financial aspects of the society and the nature and extent of benefits derived by members from the society.

The case study method followed for the working of the society and the field study method for the pattern of membership etc.

Commencement — March '74
Completion — March '75
Degree — Post graduate diploma in Agricultural Economics and Co-operation.

**Annamalai University, Annamalainagar.**

59. Writing university level text book in agricultural economics.

Commencement — 7-1-72
Comp.etion — 6-1-75
Sponsored by UGC

## COMMERCE:

**V. O. Chidambaram College, Tuticorin.**

60.. Commercial education in India with special reference to Tamil Nadu.

A survey has been made of institutions in the State of Tamil Nadu imparting commerce education at various levels and a comparison of the syllabi with that of other States is being made, with a view to make specific recommendations for reconstruction of commerce education

Commencement — July '74
Completion — July '77
Degree — Ph. D.

## EDUCATION :

**Madras Institute of Development Studies, Madras**

61. Primary education, wastage and adult literacy in Tamil Nadu.

Reported in the Bulletin, 1974, Vol. IV, Nos. 5 and 6, Page S. 16.

## CRIMINOLOGY :

**University of Madras, Department of Psychology.**

62. An exploratory study of the narcotic drug abuse problem among college students.

Reported in the Bulletin, 1974, Vol. IV, Nos. 5 and 6, Page S.16

63. A study of certain psychological and social factors associated with crime. Specific problem of research to be determined.

Commencement — April '74
Completion — April '76
Degree — Ph. D.

64. Mass media and juvenile delinquency-a correlational study of the effects of mass media on certain psychological aspects of delinquents in comparison with non-delinquents.

Commencement — February '75
Completion — February 77
Degree — M. Litt.,

## GEOGRAPHY

**Muthurangam Government Arts College, Vellore.**

65. The impact of planning on the development of social services. A case study of Kanyakumari district. To study whether there has been a development of social services comparable to the growth of population, whether the villages have lagged behind urban centres, whether there has been a lopsided development in certain services and whether there are regional differences in the development of social services. Data collected will be mapped to represent the distribution of different services during 1951 - 71, spatial differences in availability of services will be examined and cartographic analysis provided for planning future development of social services.

Commencement — 1-1-75
Completion — 1-1-77
Study sponsored by the U G C

**Sri Meenakshi Government College for Women, Madurai.**

66. (1) Pilot study of the Down Town area of Madurai city and (2) Shopping parade of Goripalayam, Madurai suburb and traffic survey.

To study the land use pattern along the shopping parade, details of the use of buildings and their condition, stage facilities in shops, nature and source of commodities sold, recent changes, temples the main attraction of pilgrims, movement of pilgrims on festival days.

Questionnaire methods and group survey.

Commencement — (1) 17-3-74
— (2) 19-11-74
Completion — (1) 19-3-75
— (2) 19-11-75
Degree — M. A.

67. Pilot study of the inland influence of Madurai district. (1) to draw flow maps for the distribution of milk from and to Madurai city (2) circulation of Hindu, Dinamani, Dinathanthi and Indian Express from Madras city.

Collection of data from various offices and publishers.

Commencement — (1) 18-8-74
— (2) 18-8-74
Completion — (1) 10-4-75
— (2) 15-2-75
Degree — M.A.

68. Weathering and Rock study in Tirupparankundram. To study the rock types and weathering, field sketching, stone carvings of the temple and the street pattern in relation to the temple.

Observation and identification of rocks.

Commencement — 15-9-74
Completion — 15-9-75
Degree — B. A.

69. Study of landscape and land use pattern in Coimbatore, Mangalore, Goa and Madras.

To study the landscape patterns, mountains, plains, plateau, course of the rivers, agricultural activity and industries.

A report to be written.

Commencement — 19-2-75
Completion — 26 2-75
Degree — B. A.

70. Socio - economic survey of a village.

Reported in the Bulletin, 1974, Vol. IV, Nos, 5 & 6 Page, S. 16.

**HISTORY**

**Madurai University - Dept. of Ancient History.**

71. Origin and evolution of place names in Tamil country with special reference to Tanjore area. Reported in the Bulletin in 1974 in Vol. IV, Nos. 5 & 6 Page 5..3.

72. Chronology of the early Pallavas.

To determine the so far indeterminate chronology of the early Pallavas (3rd century to 6th century A. D.) based on a number of early Pallava inscriptions and primary and secondary literary sources.

Commencement — '73
Completion — '75
Degree — M. Litt.

73. History of Madurai, 1736 - 1801, from the fall of the Nayaks to the establishment of British powers.

Commencement — 71
Completion — 74

## Presidency College, Madras

74. History of Madras High Court.

To study the origin and evolution of the Madras High Court with special stress on the social influences, certain critical explanations for some of the landmarks in the process of High Court history and social influences that reflected in the legal legislation of the High Court. By study of records in the Madras Record office and High Court proceedings.

Commencement — April '73
Completion — '76
Degree — M. Litt.

75. A critical study of Regionalism in National Movement - Tamil Nadu.

To study the mass participation in National movement with particular reference to the traditional caste ridden society and the interaction of regional associations and attitudes fo the national movement. By study of materials from the archives, college and private documents.

Commencement — October '74
Completion — October '75
Post doctoral research.

76. Madras Presidency under Lord Pentland (1912 - 19)

To explore how the period of Lord Pentland was helpful for the birth and growth of non-brahmin movement and social awakening in Madras and the effects of the changes introduced by him.

From materials collected from archives and later personal interviews.

Commencement — 1-1-73
Completion — 1-1-76
Degree — M.Litt.

77. History of Dalavay Mudaliars.

To trace the origin, growth and decline of the Dalavay Mudaliars and their services to S. India, especially to Tirunelveli.

By consulting records in archives and local records.

Commencement — April '73
Completion — April '76
Degree — M.Litt.

78. History of American Consulate at Madras.

To trace the history of the consulate and the mutual influences in the political, social and cultural fields.

By consulting records in the Consulate and personal interviews.

Commencement — January '73
Completion — January '76
Degree — M.Litt.

79. Self respect movement of Periar E. V. Ramaswamy Naicker.

To trace the rise and growth of self respect movement and its impact on the Society.

By consulting records in archives, Journals and interviewing leaders of the movement.

Commencement—April '73
Completion —April '74
Degree

80. Social history of Tamil Nadu with particular reference to untouchability (Modern period).

To survey the ramifications of the phenomenon of untouchability in the various layers of society, the conditions of scheduled caste in society and the impact of Christianity and western education on untouchables and untouchability.

From records in the archives, field work in typical villages where untouchability prevails—Data collection by questionnaire.

Commencement — June '74
Completion — —
Post doctoral research.

81. South Indian History (broad outline).

To bring out the historical materials from the major chola literary works.

By an analysis of literary works and epigraphical reports.

Commencement — 1-4-75.
Completion — 1-4-79.
Degree — Ph.D.

**Annamalai University, Annamalai Nagar.**

82. Later Pandyas.

Reported in the Bulletin, 1974, Vol. IV, Nos. 5 & 6, Page, S. 18.

83. Toynbee's Interpretation of Indian History. A critical study of Toynbees's works in order to assess the correctness of his approach to Indian History.

Commencement — '73
Completion — '76
Degree — Ph.D.

84. The Thondiamans of Pudukkottai State.

Reported in the Bulletin, 1974, Vol. IV, Nos. 5 & 6, Page, S. 18.

85. The Role of Feudatories in Pallava History.

Reported in the Bulletin, 1974, Vol. IV, Nos. 5 & 6, Page, S. 18.

86. The impact of Christian missionaries in South Indian History.

To study the significant impact of the Christian Missionaries in South Indian History, the spread of Christianity and the work done by the missionaries from the 18th century.

Commencement — 14-10-74
Completion — 14-10-77
Degree — Ph. D.

## POLITICS AND PUBLIC ADMINISTRATION

**Presidency College, Madras**

87 A study of personel management in Pallavan Transport Corporation.

To study the administrative set up, growth and development of this public sector.

Commencement — April '70
Completion — July '75
Degree — M. Litt.

88. History of the Justice Party.

To study the services rendered by the Justice Party to the down-trodden of Tamil Nadu, how far has Ethos of Non-brahmanism succeeded.

By study of party system in other countries from text books, newspapers etc. Personal interviews with V.I. Ps and study of records in archives.

Commencement — 1-4-74
Completion — 1-4-78
Degree — Ph. D.

## PSYCHOLOGY

### University of Madras, Department of Psychology

89. A study of the physiological and psychological development process in infants.

To study infants individually and longitudinally for a period of 7 months with regard to some selected physiological and psychological variables,

Mothers to be interviewed to understand individual characteristics of infants and infants to be given visual discrimination tests.

Commencement — April '74
Completion — April '77
Degree — Ph. D.

90. Impact of higher education on attitudes of women students.

Reported in the Bulletin in 1974, Vol. IV, Nos 5 & 6 Page S. 18.

91. A study of some of the factors which determine educational backwardness in 10 to 11 years old children.

Reported in the Bulletin, 1974, Vol. IV. Nos. 5 & 6, Page S. 19.

92. An investigation into the semantic aspects of certain political concepts.

Reported in the Bulletin, 1974, Vol. IV, Nos. 5 & 6, Page S. 19.

93. Cognitive styles in children.

Reported in the Bulletin, 1974, Vol. IV, Nos. 5 & 6, Page S. 1

94. A study of the relationship of a few selected variables to the academic achievement indices of secondary schools.

To find the factors from the academic achievement of secondary schools, the best predictions of achievements and to develop a standardised achievements test for XI standard pupils.

Information from Headmasters, teachers and pupils collected by questionnaires.

Commencement — July '70
Completion — July '74
Degree — Ph. D.

### Presidency College, Madras.

95. Creativity and scholastic achievements in school subjects, with a view to demonstrating the need for revising curricular and educational objectives so as to incorporate the exercise of creative thinking.

Objective type - Achievement tests devised for 3 school subjects, English, Mathematics and Science.

Commencement — July '71
Completion — Continuing
Degree — M. Litt.

96. Personality factors relating to absenteeism.

To find out the relationship between personality variables and industrial absenteeism.

High absence, moderate absence, and low absence workers were selected from attendance registers and personality tests were given.

Commencement — '68
Completion — '75
Degree — M. Litt.

97. Adolescent value patterns

To assess and discuss the value pattern on religion, science, democratic attitude (sex difference included).

Questionnaire method.

Commencement — October '67
Completion — October '69
Degree — M. Litt.

98. Personality

To study the factors operating on personality and the nature of behaviour.

Commencement — August '61
Completion — January '68
Degree — Ph. D.

**Annamalai University, Annamalai Nagar, Dept. of Psychology.**

99. Adjustment problems of the aged.

To study the various kinds of problems faced by elderly persons, the role perception of the aged persons by themselves and their role—perception by significant members of the family, and how these are related to the adjustment difficulties of the aged.

An activity index and life satisfaction index are to be used.

Commencement — June '73
Completion — December '76
Degree — Ph. D.

100. A study of factors affecting the personal adjustments of college students.

To investigate the various personal, educational, economic, political, religious problems faced by college students and study their effect on attendance, academic achievement and participation in strikes.

Proposed to prepare a personality inventory along with interview schedule, a questionnaire to identify the degree of participation in strikes and socio-economic scale statistics—analysis of variance, corelation coefficient, critical ratio.

Commencement — June '73
Completion — December '76
Degree — Ph. D.

101. Attitudes and adjustment problems of foreign nationals in India.

To study the attitudes and problems of adjustment in the social life of foreign nationals in India.

Social Distance Test of Bogardus in a modified form, Ascendance Submission Test of Allport and a new scale on social adjustment besides questions on qualitative basis used.

Commencement — March '65
Completion — December '75
Degree — Ph. D.

102. A psychological study of consumers' behaviour towards supermarkets in Tamil Nadu.

To study how the factors of learning, motivation, personality and socio-economic factors of consumers influence, their behaviour in the market, particularly in supermarkets.

Reported in the Bulletin, 1974, Vol. IV, Nos. 5 & 6, Page S. 20.

**Indian Institute of Technology. Madras.**

103. Job satisfaction and job performance among the middle managers in a private Industrial organisation in Madras.

Reported in the Bulletin, 1974, Vol. IV, Nos. 5 & 6, Page S 20.

## SOCIAL WORK

### Loyola College, Madras-Social Work Dept.

104. A study on the Psycho-social problems of students using drugs in city colleges. To find out the psycho-social problems of students using drugs, the reasons for use, how they were initiated to the habit, the mode of taking, the different kinds of drugs, the effect of drugs and the social background of those using drugs.

The study was conducted in two Arts, two Science and two Professional Colleges in the city, selecting 10 drug users from each. Questionnaire interview schedule and participant observation were used.

Commencement — June '74
Completion — March '75
Degree — In part fulfilment of M.A.

105. A critical study on the adjudication of disputes in the Madras Labour Court.

To assess the degree of satisfaction and confidence the management and workers have in the Labour Court, the number and nature of cases that come to court, time taken to pass awards and whether people at large have confidence in the Working of the Labour Court. A questionnaire was used for ten lawyers who took up the cases and interview schedule for ten management representatives and ten workers to collect data of cases in the Madras Labour Court, Chetpet.

Commencement — June '74
Completion — February '75
Degree — In part fulfilment of M.A.

106. A study on the absenteeism from medical treatment among leprosy patients.

To find out the causative factors of absenteeism from medical treatment among leprosy patients from St. Thomas hospital and Leprosy Centre, Chettupattu, N. A. District. One hundred absentee patients, selected by simple random sampling, were interviewed using interview schedule.

Commencement — March '74
Completion — January '75
Degree — In part fulfilment of M.A.

107. A study on the working of the Small Scale Industries in Madras city.

This study is intended to provide useful information regarding planning, finance, marketing, labour etc, to probe into the difficulties encountered by entrepreneurs to assess the impetus given for starting of new ones and to evaluate the contributions of these industries to the national economy.

The study was conducted in the two industrial estates - Guindy and Ambattur, using interview schedule for collecting data from thirty different small scale industries, chosen by random sampling.

Commencement — June '74
Completion — March '75
Degree — In part fulfilment of M.A.

108. Customs and habits of Kuruvikkarans.

To study the customs and habits of Kuruvikkarans a nomadic tribe, and to see how far it differs from the customs and ways of life of other people and their attitude to civilized way of life.

Fifty kuruvikkarans were selected and studied by using observation and intervewing them with an interview guide in two areas, Saidapet and Orakhadu.

Commencement — June '74
Completion — March '75
Degree — In part fulfilment of M.A.

## Madras School of Social Work, Madras.

109. Household Survey of three divisions in Madras City.

To study the demographic pattern of the population, health, education, vocational training, recreation and other services and the utilisations of these services.

A random sample of 676 households studied using a structured schedule.

Commencement — July '73
Completion — June '75

Sponsored by UNICEF and the Centre for Municipal Administration, New Delhi.

110. Case study of peasant organisations in Karaikkal, Pondicherry State.

To study the organisations that protect and promote the group interests of the rural weak and the rural strong. All organisations in 12 of the 117 villages in Karaikkal are to be studied.

Commencement — July '75
Completion — March '76
Sponsored by FAO

111. Social Welfare Manpower in Tamil Nadu.

To study the social welfare manpower needs in Tamil Nadu, manpower utilisation and to identify the levels of education and training for different categories of social welfare personnel.

Methodology to be finalised.

Commencement — April '75
Completion — June '76
Sponsored by the Dept. of Social Welfare, Govt. of India.

## SOCIOLOGY

## The Gandhigram Rural Institute, Madurai.

112. Cobblers and agricultural innovation—A study in the socio-economic consequences of occupational displacement in 25 villages of the Institute's service area.

To find out the extent of agricultural innovation and the number of cobblers families displaced from their traditional occupation and the socio-economic consequences of the displacement.

By random sampling 100 cobblers in 25 villages to be selected and an interview schedule to be used.

Commencement — January '75
Completion — November '75
Sponsored by the Dept. of Research.

## Annamalai University, Annamalainagar

113. A sociological study of priestly community.

To study the continuity change in respect of ceremonialism and ritualism, priestcraft and orthodoxy and to bring out the external factors bringing about change and trends.

Major sociological and anthropological field technique used - questionnaire interview, observation, case history evidences.

Commencement ... February '72
Completion ... 1975
Degree ... Ph. D.

## DEMOGRAPHY

### Directorate of Census, Govt. of India.

114. Analytical studies on sample registration scheme.

To evaluate the sample registration scheme, which is designed to provdie reliable estimates of birth and death rates, half-yearly analytical studies are being carried out. The first study "Report on the type of events missed by the enumerators and supervisors and reasons thereof" already published.

Commencement — 1974
Completion — continuing

## TOWN AND COUNTRY PLANNING

### Directorate of Census, Govt. of India.

115. Study of villages.

To gain insight about the parameters of socio-economic structure of the village and the dynamics of emergence, persistence and change of the various elements of structure through the inter-play of various psycho-social, techno-economic and political forces by means of micro-study.

Four villages in Tamil Nadu and two in Pondicherry selected and two surveyed in a year. Field data is collected by household schedules and village schedules. Besides group discussions with Panchayatdars, Administrators are held to find the trend and quantum of progress in villages and literature made use of.

Commencement — 1973
Completion — continuing.

116. Intensive study of selected towns.

To study the growth of towns in the context of transformation of the rural societies, Aims to get an insight into the growth history of the town and its various institutions, frequency and pattern of interaction among different segments of population, its linkage with rural hinterland change of values in the modern set up.

18 towns in Tamil Nadu and one in Pondicherry selected. Both normative and statistical approaches are made. Field data canvassed by household, institution, commercial and industrial establishment, temple, bank schedules. Besides group discussions with town elites, administrators etc held and literature made use of. Four towns, Chidambaram, Mannargudi, Tiruthani and Cheranmahadevi already studied.

Commencement — 1973
Campletion — phased up to 1979

## MULTIDISCIPLINARY

### The Gandhigram Rural Institute, Madurai.

117. Backward classes in Madurai district—a study in social change.

To identify the change areas and contents with respect to economic and educational status. occupational structure, socio-economic and political base.

Interview schedule used. Multistage sampling applied to selected blocks-villages and respondents in Madurai district.

Commencement — April 75
Completion — January '76
Sponsored by the Dept. of Research.

The following items of research in Home Science were received late and should be added to the report. This increases the total number of research items to 123.

## HOME SCIENCE

### Sri Avinashilingam Home Science College, Coimbatore.

118. Formulation and evaluation of low cost and other food commodities in the School midday meal programme of Tamil Nadu.

To replace C.S.M. and other CARE Commodities with locally available cereals and pulses which are low cost and provide the required nutrients for the school age children, to develop the product so that it can be processed without additional oil and make it possible to process the product in the central kitchen.

A series of cereal legume mixtures were formulated. The protein quality of a cereal maize, with selected indigenous foods namely cow gram, green gram, horse gram, sunflower seeds and groundnuts in different combinations was studied on albino rals using body weight changes, PER, NPU and NDP calaries percent as criteria.

Commencement — 1-4-74
Completion — 16-2-75
Sponsored by CARE, Tamil Nadu.

119. Nutritional evaluation of high lysine maize.

To ascertain the effects of feeding children 18-30 months of age in rural areas with high lysine (maize, ordinary maize, skim milk on their) growth and to serve as an educational programme in the popularisation of the new maize variety.

200 Children were selected from low socio-economic status and divided into 4 groups of 50 each. The proposed diets were of ISO calorie (450 calories) and ISO protein (10 g) and this was fed for a period of 10 months. The results showed that the weights and heights of children in the high lysine maize group ranked next to the skim milk group. The most predominant clinical syndromes were mild forms of protien-calorie malnutrition and anaemia. The opaque-2 maize group was found to be better than ordinary maize in promoting growth

Commencement — 1-9-73
Completion — 28-2-75
Sponsored by Government of India.

120. Play interests of selected 3 to 6 years old preschool children both at home and at school.

One hundred children were selected and one hour was spent on each child. Interviewand observation schedules used.

Organised games appeared to be of the greatest interest for preschool children and as age increased, co-operative play. Irrespective of age and sex interest was shown in sand play, swinging etc. Boys were found more interested in vigorous games. At home children preferred ball play and doll play.

Commencement — '73
Completion — '74
Degree — M.Sc. (Home Science)

121. Recreational interests of early adolescents.

To analyse the recreational interests of early adolescents and the influence of income level on recreational interests.

One hundred boys and one hundred girls studying in the X and XI standards in 4 Schools in the City of Coimbatore, in age range 14 to 15 years were selected, half from low income and half from middle income groups. Questionnaires used.

Commencement — July '74
Completion — February '75
Degree — In partial fulfilment of M. Sc.

122. Rising food prices and its impact on Consumers' buying habits.

To find out the extent to which consumer buying habits are affected by food price increase and to suggest measures to improve consumer satisfaction.

Commencement — October '73
Completion — April '74
Degree — M.Sc. (Home Science)

123. Impart of family planning programme on the rural households with reference to their food expenditure.

To assess the impact of family planning programme in terms of awareness, attitude and acceptance, to gauge how far the reduction in family size has influenced the food expenditure, to measure increase in demand for food due to the increase in income and in the family size.

A precoded interview schedule was administered on a sample of 500 households selected by the three staired stratified random sampling method.

Commencement — July '70
Completion — July '75

# MADRAS INSTITUTE OF DEVELOPMENT STUDIES : PUBLICATIONS

publishers : (from whom copies may be ordered)
M/s. Sangam Publishers,
11, Sunkurama Chetty Street,
Madras-600001.

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**I. Books Published :**

1. Income Earning Trends and Social Status of the Harijan Community in Tamil Nadu
   By A. Vagiswari (Price Rs. 12/-) Demy 8VO
2. Economics of Dry Farming in Tamil Nadu
   By R. K. Sampath and Jayalakshmi Ganesan (Price Rs. 15/-) Demy 8VO
3. Nutrition in Tamil Nadu
   By Rajammal P. Devadas (Price Rs. 15/-) Demy 8VO
4. A Guide to Research in Economics
   Edited by C. T. Kurien (Price Rs. 30/-) Demy 8VO
5. Land Reform in Tamil Nadu
   By G. Venkataramani (Price Rs. 15/-) Demy 8VO
6. Techniques of Perspective Planning
   Edited by Malcolm S. Adiseshiah (Price Rs. 9-40) Crown Quarto
7. Plan Implementation—Problems and Prospects of the Fifth Plan
   Edited by Malcolm S. Adiseshiah. (Price Rs. 9-40) Crown Quarto

   (Items 6 and 7 are a joint MIDS and ITES enterprise published by Tamil Nadu Government Press from whom they can be purchased)
8. Poverty and Wage Goods Supply in Tamil Nadu
   By M. Ramamurthy (Price Rs. 20/-) Demy 8VO
9. Women's Welfare in Tamil Nadu
   By K. G. Rama (Price Rs. 10/-) Demy 8VO
10. Minor irrigation in Tamil Nadu
    By G. Venkataramani (Price Rs. 20/-) Demy 8VO

**II. In Print :**

11. Small Fishermen in Tamil Nadu
    By C. Selvaraj

**III. Future Publications :**

12. Rural Employment in Tamil Nadu
    By J. Viswanathamurthy
13. Introduction to Mathematical Economics and Economics Statistics
    By N. Rajagopala Rao
    V. Lakshmana Rao
14. Rural Primary Education and Adult Literacy in Tamil Nadu
    By Alexander Joshua

Regd. No. M. 8831

# MADRAS INSTITUTE OF DEVELOPMENT STUDIES (MIDS)

The Institute founded and run by Dr. Malcolm S. Adiseshiah is a charitable trust registered under the Madras Charitable Trusts Act.

The aim of the Institute is to contribute to the economic and social development in Tamil Nadu and India.

The activities of the Institute are :

— Studies and action-oriented research in micro-development problems;

— Documentation and library service in development programmes;

— Exchange and dialogue at the State, National and International levels on development issues;

— Publication of papers and research results of the Institute.